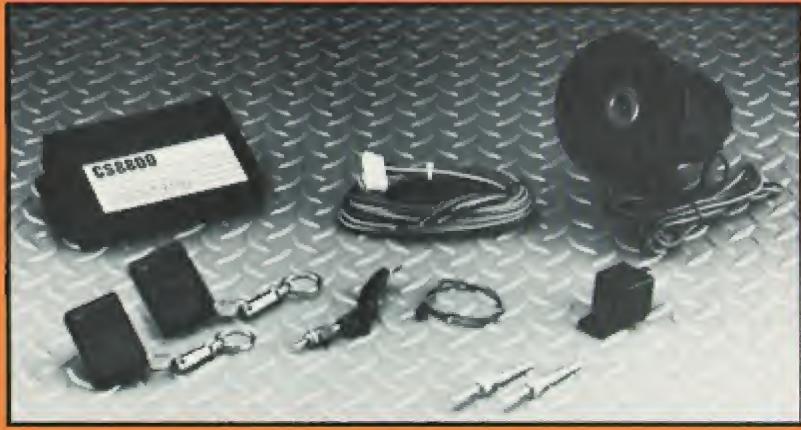
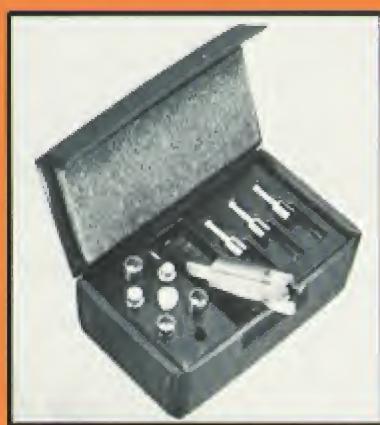


The National Locksmith[®]

March 1988



New & Profitable Ideas

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The National Locksmith • March 1988 • Volume 59, Number 3

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Click on the article you wish to read

The National Locksmith

March 1988



New & Profitable Ideas

On The Cover

This month's cover features new and profitable ideas. Following are the companies whose products are shown. From upper left (clockwise): Abloy Security Locks; Guard-Nut Inc.; Aable Locksmiths; HPC Inc.; Crime-stoppers Security Products; (center) Abus Lock.

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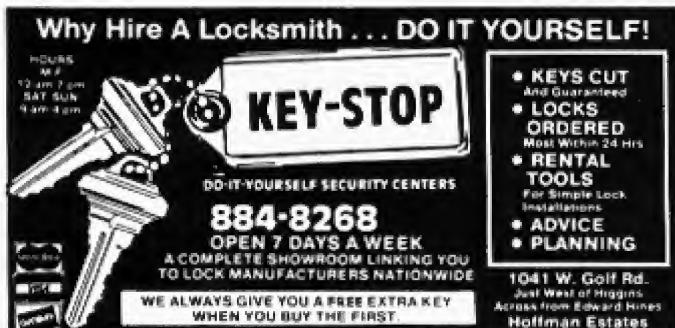
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Commentary

Service Is The Key

The ad which we have reproduced here actually ran in our local paper not long ago. Nice, isn't it? As if locksmiths need this kind of help! Well the good news is that the phone number on the ad has been disconnected and there is no forwarding number so I presume the "Key-Stop" is out of business. It must not have lasted very long at all.



Maybe there is a lesson to be learned from this ad, however. Notice that the advertisement offers just about all the *products* one could expect to find in a locksmith shop. It even promises a free extra key when you buy the first. (Nice touch? Or a waste of money?) But what the ad makes clear is that there are no *services* offered by the shop. Oh sure, it says they'll help you with "advice and planning." They will even rent you tools. But from there on, the customer is on his own.

The heart of a locksmith business is service. You cannot get by without product, but your expertise is what sets you apart from the Do-It-Yourself(DIY) center. The fact is that most people don't have the know-how to install their own locks. And many other people just don't care to do it themselves. But let's face it, installing the average lock just isn't that hard.

Notice that the ad doesn't offer masterkey charts and pinning kits for sale. I doubt that they would have been able to rent many car or safe opening tools no matter how much free advice and planning they gave away. Can you image renting out a thermal lance to a Do-It-Yourselfer who locked himself out of the safe? My free advice would be, "Don't slice off your hand." Or should I have warned the customer about thermal relocks instead?

The point is that service is a critical part of what you offer your customer. And the only way to be able to offer service is to acquire enough *skills* to help your business prosper. Achieve new skills through this magazine, videos, books, classes, seminars, your associations, etc. Why did the Key-Stop fail? Because they didn't have the services to back up the products.

The National Locksmith reached a new milestone quite recently. When we first purchased our computer seven or eight years ago, it had room to store so much information! But over the years the magazine has grown very big with thousands of new subscribers joining every year. We now have well over 55,000 different locksmiths on file!

One day, not long ago, our programmer announced, "Did you know that within two weeks you won't have enough room to add on any new subscribers?" Since we had several hundred sitting on the shelf at that moment waiting to be entered, I suggested that he juggle things around and create more space. However, no more space was to be found. Therefore, our new computer was installed today. We now have room for about 200,000 more subscribers!

Correction

In our December Locksmith Directory issue we mistakenly gave an incorrect phone number for Briggs & Stratton Technologies. The correct address is: P.O. Box 702, Milwaukee, WI 53201. The phone number is (414) 259-5218. Our apologies for any inconvenience.



Marc Goldberg
Editor/Publisher

March 5

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your views. We do reserve the right to edit for clarity and lengths. Please address your comments, praise, or criticism to: Editor, The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.

La Gard Criticizes Combination Lock Article

As you and I both know, there is obviously a forbidden zone in combination locks. Although, a recent article published by *The National Locksmith* in the January 1988 issue, entitled "Combination Changing Procedure," contradicts this statement.

The procedures stated in the article mentioned above, can technically be done. However, mis-splitting can change the area of the forbidden/zone, which by no means is recommended by La Gard. These procedures also conflict with what the industry has been telling their customer for years.

I am a staunch supporter of the writers and publishers in this industry and have been for many years. What has me so concerned is, with the amount of information readily available today, articles are being published that have not been completely thought out. I believe that it is up to the writers themselves to have the subject matter inves-

tigated thoroughly in order to provide the readers with comprehensive information.

Nick Gartner
President
La Gard, Inc.

Editor's Note: As you state, the procedure mentioned in the article can be done. Our intention with that article was to offer information to the locksmith that he did not previously have. We understand, however, that you recommend a different procedure.

Tradesman Objects To Police In Seminars

This is in response to the letter from the law officer who gave the suggestion of getting the information on how much time was spent opening locked cars, or how many times a year they went to open a locked car.

That may work for a law officer but it did not work in my town for me, a taxpaying citizen. I went to the sheriff's office and asked to see the log book. And you would have thought I just robbed a bank. I was told that no way was I going to see their log book. When I said that I thought that was open to the public they said not here. The same thing happened when I asked to see the city police log book.

I then called the city manager and told him how I wanted to show them how they could save money but that I could not get any information to confirm how many lockouts, time spent, etc. He said that it wouldn't make any difference whether they spent 20 minutes or two hours opening cars. They were performing a public service. So much for that idea.

I would like to say a few words about the law officers if I may. When I went to take a car opening course, I was shocked when the instructor told us that there may be a police officer or two in the class as they could be sued if they tried to keep them out. Now if I tried to go to the college here and take a course on law I would not be allowed to do so. The same with any seminars the law enforcement agencies put on. But just take a look around when you take your course or attend the trade shows or seminars.

What I am trying to say I guess is that if you are just a private citizen you are restricted as to what enforcement you can do. But if you are in public service you can do just about anything you want.

Now if I sound bitter, its because I don't like to have to pay for my own locksmithing education and the law officer's too. Now I realize that all of the officers don't get this free ride. I have in the next county one full-time



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deputy sheriff who is a locksmith, and now I am told that a city police officer is going into the business. I guess it must be a good profession to get into.

Thank you for letting me blow off some steam.

LeRoy Gramza
Michigan

Reader Questions Servicing Mailboxes

Thank goodness for *The National Locksmith* magazine, and all the good people of your organization that makes all of this possible. Every issue of the magazine has many interesting articles and I really enjoy Letters and Technitips.

Last year we saw several letters pertaining to locksmiths having interference from both police and firemen, when the locksmith was called upon to open a car. In my personal case, a lot of my calls to open an auto or a home, have been referred by the local police department.

But what about mailboxes? Not the boxes in the post office lobby, but mailbox clusters that are located on private property such as mobile home parks, apartment complexes, etc. Here

in the high desert of Southern California I have had many requests to duplicate a mailbox key or to open and replace a lock in the mailbox at the complex. These requests come from the box holder or the property manager, and, I give the best service I can give. Then suddenly I am ordered to forget the order, because the post office will do the work.

That's all well and good, but like all Government agencies, it takes too long. For example, on May 28, 1987 I moved into my new mobile home, in a park and was told by the park management to contact the post office for the key to my mailbox. All I had to do was show the post office my rent receipt. The problem was that the key had been lost. The local Postmaster had to send down to San Bernardino for the necessary locks, wait for people on vacation, etc. before the lock could be installed. I waited for over three weeks to get my key. In the meantime I had to wait for the carrier to arrive, and the carrier would hand me my mail.

After over 30 years in the Federal Government, 20 years plus in the Military, and ten years plus with the old Post Office Department and the current U.S. Postal Service, I am tho-

roughly acquainted with government key blanks and keys marked "Do Not Copy," "Do Not Duplicate," etc. So much for red tape.

I am reminded of the copy of the Locksmith's Code of Ethics hanging on my wall, which reads in part, "Be a credit to your trade by being an outstanding and helpful member of your community." At least I hope that all locksmiths follow this code.

Robert Clark
California

Council Member Advocates Locksmith Testing

There has been a lot of concern expressed from around the country about the ALOA P.R.P. and, whether or not you can test a craft. In as much as none of the committee members of the International Locksmith Standards Council has chosen to reply to this concern, I will.

In the early 1970's the members of Northwest Locksmith Association, instituted a certification test in order to raise the standards of our organization. At the same time we instituted a series of classes for those members who felt

Continued on page 81



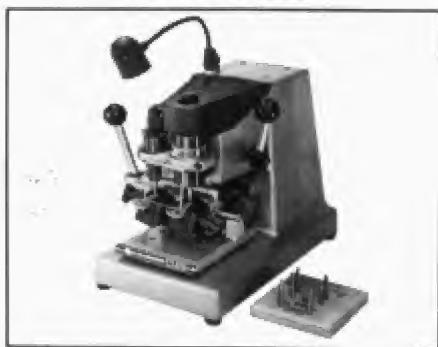
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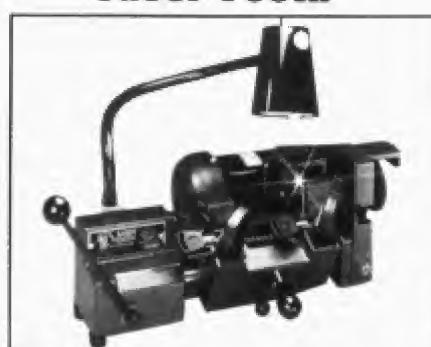
The Free Flo



Second Prize

Designed to cut Medeco® and Emhart® keys. Duplicates a Medeco® key very quickly and accurately. Will also cut regular cylinder keys. By Fulton Lock.

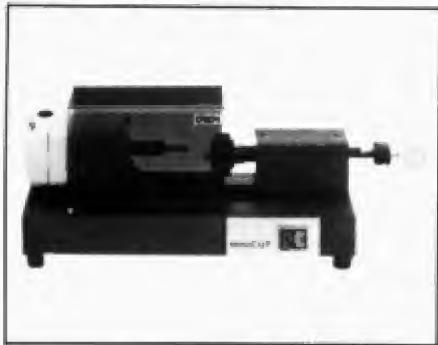
Saber Tooth



Third Prize

A fast semi-automatic duplicator featuring carbide cutter, full 1/3 hp motor, 2400 rpm. Working lamp and deburring brush are standard. From The Locksmith Store.

Ilco KD94



Fourth Prize

Cuts the 1137 tubular key, brass or steel accurately and quickly. Features include large chuck to hold standard size key heads, easily adjustable.

9150 Speedex



Fifth Prize

The Speedex has been transformed from the old stand-by to the machine for today's needs. Features double sided jaws. From HPC.

\$100.00 Cash



Sixth Prize

Everyone can use a few extra dollars! This prize will brighten your day...and fatten your wallet.

Contest Rules

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Steve Spiwak, Technitips' Editor, *The National Locksmith*, 698 Bonded Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will not be eligible! So get busy and send in your tips today! You may win cash, merchandise, or even one of several key machines! At the end of the year, we choose the winners of the above prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1987? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$20.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker, decal and patch. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$30.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal, patch and a Locksmith Cap. Plus, you may win one of the great prizes pictured above.

Technitips

Helpful Hints from Fellow Locksmiths



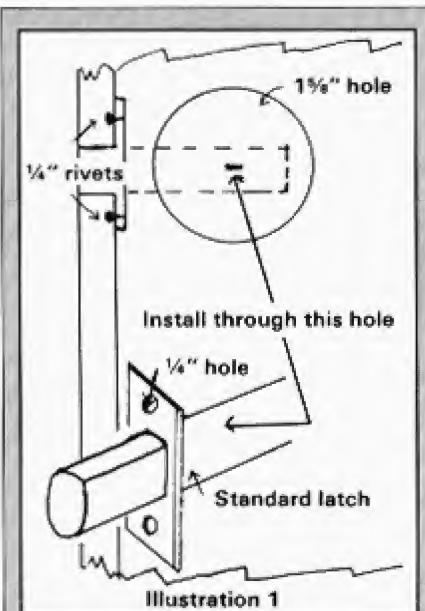
Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.

by Steve Spiwak

March's Best Tip

Have you ever installed a deadbolt on a metal door and noticed the 1" hole thickness was about 1/16" thick? This thin support is all that is used to secure your drive-in latch. After you install the deadbolt, and return to your shop, the customer calls and informs you that the deadbolt is no longer working. You return to the house and find that the 1" bolt assembly has sagged, and therefore does not allow the deadbolt to work. Here is the solution that I came up with.

Drill your holes as usual. Insert a face plate bolt assembly in place of the drive-in bolt. Mark your two holes. Remove the latch, and drill these holes for a 1/4" rivet. Now insert your standard latch through your 1 1/8" hole. Line up your two 1/4" holes and insert your rivets into these holes. Be sure that the latch is turned to the correct position. Now you are ready to install your dead-



bolts. (See illustration 1.) As a result of this procedure, you will not have to worry about your customer calling with this problem.

Gary Johnson
West Virginia

On a late night call, I went to open the trunk of a 1988 Pontiac Grand Prix, as my customer had locked his keys inside the trunk compartment. Upon arrival I found the car doors were also locked. Since night-time is

excellent for observing with a flex-light, I wedged the window and looked inside the door panel, but found no logical point of attack to gain entry.

On a whim I took my newly purchased HPC-CO59 Beretta tool just to see if it really would enter the inside of the window. It entered extremely easily, and I still had the window wedged! Next I removed the wedge, turned the tool to contact the inside button and presto, the car was unlocked!

The owner thought I was a genius, and my head was almost ready to swell with pride until I approached the glove box lock for removal to generate a key to open the trunk. Alas, there was no keyed lock. Instead, there was a combination lock on the glove box. Inside the glove box was the electric trunk release button, which does require the ignition key turned on to supply power to the trunk button. Directly above the trunk release button is the glove compartment light switch. Both the light switch and the trunk button came out of their respective mounting holes quite easily by gently prying on the right and left sides of each with a thin blade screwdriver.

Now, immediately in front of you is the light switch (with 12 volt current) and the trunk button, wires to both are now exposed and easy to access. The next step is to transfer 12 volt power from the light to the trunk button. Each switch has two wires. Red is 12



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volt hot from the light switch. A short jumper wire would be ideal, but not having one handy, I unfolded a small paper clip and made contact with the red wire from the light switch and either of the two wires from the trunk release button. I say either wire because one wire will instantly open the trunk, the other wire requires the button be depressed to make contact. If you depress the trunk release button while jumping the 12 volt light wire to the trunk switch, it doesn't matter which wire you contact on the trunk switch, it will open instantly.

Both light and trunk switches snap

instantly back into their respective mounting holes, and access to the trunk has now been gained. Opening the car and the trunk in the above manner took under 10 minutes, but keep in mind that people must pay us for what we know, not how long it takes us to do the job.

Tom Holtz
Florida

Ever had a problem removing the cylinder and plug assembly from a Weiser "A" series cylinder lockset when you wanted to change the combination?

Imagine what it would be like when you have no key to do the same. The cylinder must be first disassembled from the door.

Expose and hold in a vise the center portion of the spindle at the rear of the cylinder. Since we have no workable key we must pick open the lock. Once opened, pick either to the left to 10 o'clock or right to four o'clock position.

I used a broken key extractor (see illustration 2). Insert and keep the

Broken key extractor

Illustration 2

extractor to the bottom rear of the plug. Use an outward pull of the extractor, at the same time use a screwdriver to work the plug back and forth. Be careful not to rotate the plug too far to relock the cylinder. Using the outward pull of the extractor and working the plug back and forth, the cylinder will pop out.

We can then rekey the cylinder or remake a proper key. Re-install the cylinder properly and you're on your way. Don't forget to practice proper picking techniques first.

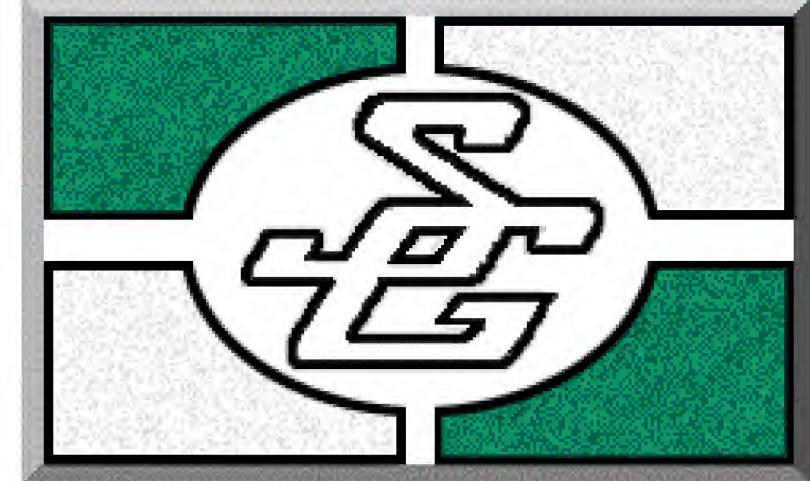
Don Maurer
Ohio

A local construction company recently brought a large box of Schlage heavy duty knob locks into my shop. Some of these were double cylinder. Most importantly, all keys had been lost. I also learned later that all were keyed differently.

I first tried picking these open to make keys, but after being successful on only one, I realized that to make a profit I was going to have to find a faster keymaking procedure.

Next I tried to disassemble the locks and found that I could see the cap on the back of the cylinder. I inserted a small wire (slightly flattened on one end) into my drill. Then I carefully depressed the retainer and inserted the wire between the cap and housing. I found that I was able to spin the cap back far enough to lift and turn the tailpiece and press the knob retainer and pull the knob off.

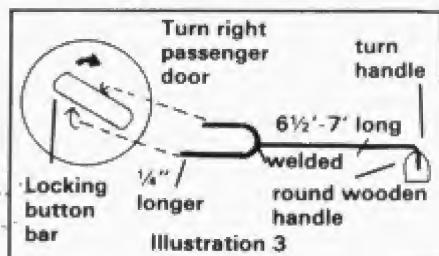
Paul Gannon
Missouri



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I have found an easy way to open Chrysler products with the round door lock. First spread the window near the post and place a wedge in the opening. You will see that there is plenty of room, especially on two-door autos. I have made a tool that will open them



faster than picking them open. (See illustration 3.)

Slide this unit across the car and turn it. This "lock bar" works fast and slick. I work this from the driver's side to the passenger door and get a clear shot.

Vic Martin
Vermont

I had a very hard time getting impression marks on "Master" brand padlocks until I discovered that the key blank that I was using hit the cover plate on the end of the padlock. When I

filed two places on the key, I was able to maneuver the key better to obtain clear sharp impression marks. (See illustration 4.)

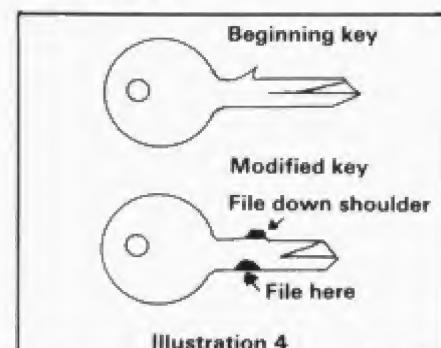


Illustration 4

I was able to do this because after filing a small place in the back of the key blank with a round file and the tip of the stop with a flat file, the key does not hit the cover plate case. This will yield good impression marks. Preparing the key blank can be done in less than one minute in most cases.

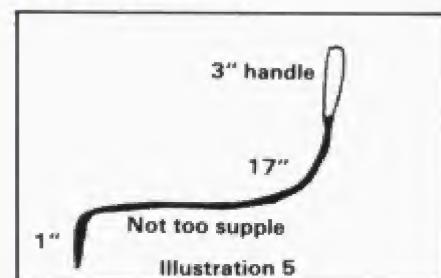
George McClary
California

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Here is a clever procedure which I use frequently when called upon to open a 1986 Dodge Van with electric locks. Take a stiff wire (about $\frac{1}{4}$ " diameter) and shape it according to illustration five. The tool is 17" long with a 3" handle.



Drive a wedge between the door and window glass. Insert the tool with the tip towards the front of the door, just in front of the door handle. Push the tool down about 8", then turn the tool towards the inside of the van. Push the tool down another 2" and you will feel a "spongy" object. Push the tool down gently and the door button will pop up unlocking the door.

Note: This Technitip works only on the driver's door!

Elwood Harrald
Arizona

I have two quick tips for you:

There is now a product out called Zap, that will soften and dissolve super glue. It is available from local hobby shops or direct from: Pacer Technology and Resources, 1600 Dell Ave., Campbell, CA 95008.

Also, the other day I was called out to key a 1980 Mazda. The key for the door lock also worked the glove box and trunk, but not the ignition. After removing the plastic shroud on the column I found a four digit number stamped on the bottom of the lock case. It was the code and the key worked.

Brad Paul
Ohio

Here is a tip on how I made a drill gauge which enables you to check both cutting edges of a drill bit when resharpening. Not only will your drill bits be sharpened correctly every time, but you can carry it conveniently on your key ring for instant gauging when sharpening drill bits.

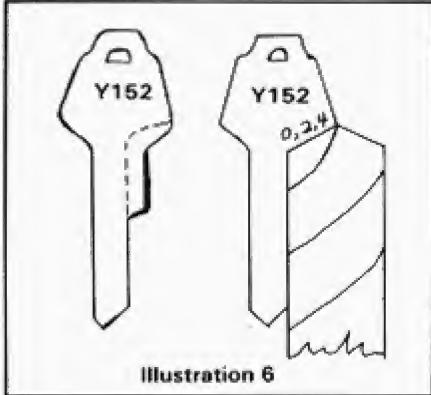


Illustration 6

Simply file a Chrysler Y152 as shown in illustration six. Mark 0 to 4 with a $1/16$ " number punch set and you have your gauge. Use a new $1/2$ " drill bit to get the correct 59 degree angle.

John De Rocili
Delaware

If I install interchangeable core mortise cylinders on the bottom of glass doors that use set screws which are only accessible from the bottom, then I do the following:

I remove the core from the mortise shell, and drill a small hole straight through the back. (See illustration 7.) This hole allows you to lubricate the internal parts of the lock without pulling the door. I usually do Medeco the same way, but you can also pull the core, remove the rubber stop at the rear

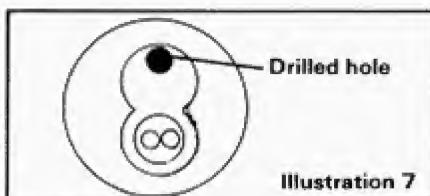


Illustration 7

of the housing, lubricate and reassemble. In addition the hole can be plugged with grease to prevent air filtration through it.

Some locks get extremely dusty and dirty from air flow.

Richard Novak
Minnesota

I have a method for opening the Ford Bronco II. I have found that most locksmiths have had problems opening these vehicles due to an inability to locate the linkage. What I have discovered is that by using the HPC Beretta tool, (No. CO-59) there is no need to locate the linkage. Using this tool saves the locksmith both time and effort.

Eric Cummings
New Hampshire

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Newsmakers

New Products and Industry News

Versatile CardAccess® 300 From Continental Instr.

CardAccess® 300 consists of a central processing unit (CPU) which contains a powerful microcomputer, floppy disk storage and a 20 megabyte hard disk (Winchester type). Supplementing the CPU is a high speed printer and a CRT terminal with keyboard to display alarms, reports, and perform programming functions. Operator convenience is provided by the detached keyboard and an ergonomically designed tilt and swivel screen.

CardAccess 300 is capable of controlling up to 256 card readers and up to 32,000 individually encoded cards. The card readers can utilize encoding technologies of either infrared, Wiegand-effect, high coercivity magnetic stripe, HandsFree™ long range proximity, or economical Prox-Sensor® short range proximity.

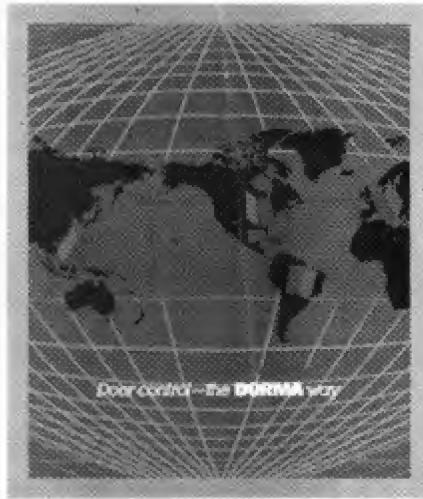


Circle 377 on Rapid Reply

Sweets Brochure Available From Dorma

Dorma Door Controls Inc. announces its new four-color Sweets brochure introducing the company's complete door control product line.

In addition to a brief review of Dorma's company operation, door closers illustrated in the brochure include the Dorma DC, TS surface applied and fire/life safety series...RTS overhead concealed and concealed-in-the-door series and the BTS concealed-in-the-floor series. The brochure also describes the Dorma GLAS series for tempered glass doors.

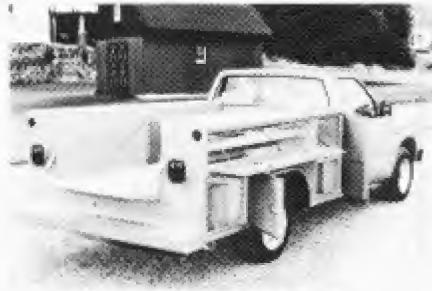


Circle 376 on Rapid Reply

New Prime Coating Process For Reading Service Bodies

A new electrocathodic prime coating system designed and built by Reading Body Works, Inc., provides tougher, smoother coatings and greater protection for the company's service bodies and caps. The system assures 100% coverage of even recessed and hidden areas, and is highly automated to eliminate most "human error" defects. It is now used at the company's plant in Reading, PA to prime all bodies up to 108" in length, as well as stake body racks and all pickup accessory products.

The Reading process is similar to electroplating, in that the paint is molecularly bonded to surfaces by a powerful electric charge. While similar systems are used by major automobile manufacturers, no other truck equipment manufacturer has a system to equal Reading's in size and sophistication, according to the company.



Circle 378 on Rapid Reply

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Keyblank Cross Reference Software From HPC

Keytrack (No. Key-IBM 525, No. Key-IBM 350) is an IBM compatible software program developed by the HPC Soft division of HPC, Inc. This program is specifically designed to locate, list, and cross reference key blanks according to the HPC/Silca number or any other major key blank numbering system in either alphanumeric or numeric-alpha fashion.

Most importantly, Keytrack is flexible. This unique program allows the user to add new keys, as well as change, delete, or edit existing keys.



Southern Lock Revives Buyer's Trade Show

Southern Lock & Supply Co. of Pinellas Park, Florida is pleased to announce the revival of their once-annual Buyer's Trade Show. The Show will be their sixth such event, last held in 1984.

The Buyer's Trade Show will feature displays from various manufacturers, providing hands-on experience with many different products, including new innovations. Manufacturer representatives will also be available to answer most of your questions.

As in the past, this year's trade show will provide free food and soft drinks, hourly door prizes, and a grand prize drawing, as well as big price discounts on selected merchandise.

The Southern Lock Buyer's Trade Show will take place Sunday, March 20th from 9 a.m. to 4 p.m., at their main headquarters in Pinellas Park, just west of Tampa. For easy directions or other details, call toll free: (800) 282-2837 in Florida, or (800) 237-2875 nationwide.

Medical Diagnostic Services Offers Head Loupe Assembly

The Visor-Clip-Lite™ is designed to provide superior magnification/illumination whenever the need arises. Spring clips attached to the loupe support the flexible Cari-Lum™ illuminator with three replaceable "AA" batteries and a krypton lamp assembly which provides fiberoptic brightness.

These and other diagnostic products are available from Medical Diagnostic Services, Inc., Clearwater, Florida.



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tools, parts, and
service for
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Masters Lock's Wide-Body Padlock

Hard-to-lock items such as trucks, industrial machines and tools, coolers, gates, freezers and other equipment are easily secured with Master's No. 101 wide-body rekeyable padlock.

Designed to protect commercial property requiring extra-shackle clearance, the No. 101 has a $3\frac{1}{4}$ " wide padlock body, a horizontal shackle clearance of $2\frac{1}{4}$ " wide padlock body, a horizontal shackle clearance of $2\frac{1}{4}$ " and a vertical clearance of $3\frac{1}{8}$ ".



To insure maximum security protection, the wide-body padlock features a case-hardened, high-tech steel shackle.

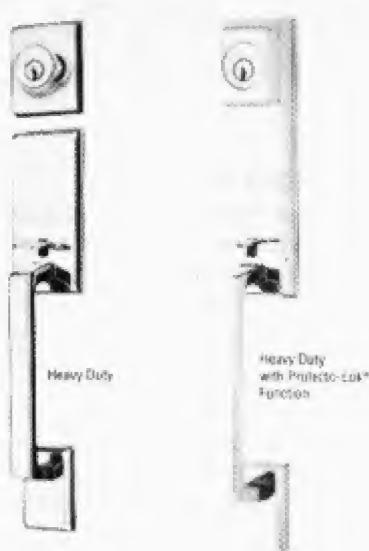
For commercial installations, the rekeyable feature allows personnel to change the padlock cylinder when a loss of security is feared, rather than replace the entire lock.

Circle 354 on Rapid Reply

New Designs Expand Kwikset's Handleset Line

Kwikset Corporation has added two additional designs to their expanded line of entrance handlesets. The new Barkley and Toledo designs join with the recently introduced Pilgrim, Esquire and Jamaica to offer builders and decorators a wide selection that range from colonial to contemporary, each designed to create a lasting first impression to any entryway.

In addition to these new designs, Kwikset has retained their five most popular designs to provide the largest selection of entrance handlesets by any hardware manufacturer. Together with the new design selections, all the mechanisms for Kwikset's entrance handlesets have been re-engineered to assure lasting reliable performance.



Both the Barkley and Toledo designs will be available in three different functions: the one-piece version that combines a built-in key locking mechanism similar to a regular entrance lockset, a two-piece or sectional style model featuring a heavy-duty deadlock with a one-inch deadbolt on the top portion with a thumb-piece latching function on the lower half, and Kwikset's newest function which combines an entrance handleset with a Protecto-Lok. The Protecto-Lok combines a handleset in one unit with a security deadbolt.

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Key Machines, Software,
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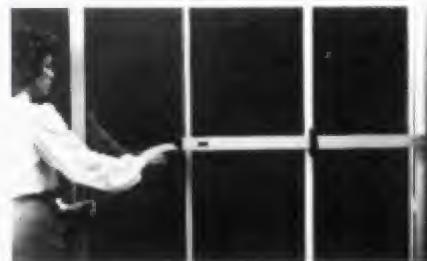


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Seco-Loc Bar™ Offers Patio Door Security

Homeowners can conveniently lock their sliding patio doors with a new security bar designed and developed by T.I.M. Mfg., Inc. The Seco-Loc Bar, which can easily be installed at any convenient height, is mounted between the frame channel and sliding door. Once in place, the Seco-Loc Bar eliminates bending, stooping, or stretching to insert or remove broomsticks or two-by-fours.

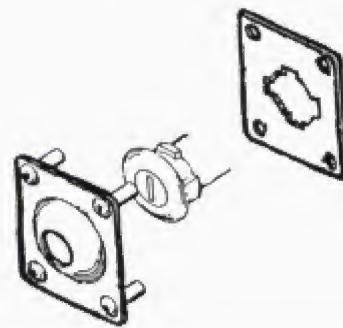


The latch handle and roller assembly allows for simple opening and locking of the door. For convenient in and out movement, a secondary latch enables the lock to be held in an unlocked position. In case of a fire or other emergency, the bar can slide open easily, providing a quick, safe escape. The security bar secures homes from break-ins by reducing the risk of an intruder prying open the door.

Valentine Lock Provides Repair Kits

The patented kits from Valentine Lock Products offer initial protection, damage repair or added security for a variety of locks.

The front protection plate is deep drawn for accurate lock cylinder clearance. The backer plate is designed to hold the OEM and replacement cylinder lock firmly. Both plates are made from 304 grade stainless steel with a number 4 brush finish and a weather seal.



Building Your Profits

"The first thing any company must do is build a customer base large enough to support the business. You must build your business on dependable and fast service."



by Robert Sieveking

Ask yourself this question. What can I do to make my business grow using the knowledge and resources I already have? This is an important question that we should all consider on a daily basis. What exactly does the locksmith have to sell that cannot be had any other place? What can we offer our customers that will build customer

loyalty and increase our trade? How do we expand our customer base to replace customers that drift away or find discount stores and hardware type lock services to meet their needs?

Competition in any industry can have many faces. The locksmith is a tradesman and a businessman. He must have the technical expertise to perform his trade in a professional manner and he must also be able to make day to day decisions that will direct the business in a positive direction. The following are a few ideas that I have used in my business to increase my customer base, compete with established shops in my area and make my business grow.

Building a customer base. The first thing any business must do is build a customer base large enough to support the business. Advertising is important, and should not be understated, but it is a passive and in most cases a very expensive method of building a business. A service business is not built on advertising. It is not built on a fancy location or a franchised name. It is built on *professional, dependable, fast and courteous service*. Take special note that I did not say cheap, inexpensive or low priced service. The prices you quote and the charges you determine as fair, can only be set by you. What other shops charge for similar services are only indicators of the



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market.

Customers who shop on price alone are usually disappointed when they get exactly what they pay for. Even when they get equal or better service than the higher priced shop could have delivered, they still believe that what they have is of less than equal quality or value. Your price schedule is a very important part of your professional image.

Professional image. Professional image is what will build your business. A customer is impressed by what he sees. That impression should be a good one. Your personal appearance and the appearance of your equipment should be one of an *organized, well groomed and successful business person*. I don't know how many times I've stopped to talk with another locksmith, and after looking into the back of his truck, wondered, does this guy haul junk or does he really work in there.

Organize the equipment and tools in your service vehicle. My dad always preached, "When you're done with a tool, put it back where it belongs." Organizing your tools and supplies will not only save you time, it will sharpen your professional image. (The way your customers see you.)

Look like the professional you want to be, because that is what you will become. You are judged on the way your customers see you. Dress the part. Old jeans and a ball cap advertising your favorite beer, just can't display the professional image you need. Clean up your act. Uniform services or owning your own uniforms will be an investment that will pay for itself with increased customer acceptance the first day. Get a haircut that says you're a professional, not a rock singer. Look successful. Talk up your business. Be positive in your attitude, but don't overstate your abilities or accomplishments. People do business with successful people.

Dependable Service. Don't make promises you can't keep, and don't start jobs that are beyond the scope of your business. If you fix something, fix it right the first time. Check your work before you leave the job, and have the customer check it with you. If there's a possibility of failure, be straight forward with your customer. Explain the problem.

An appointment is a promise to be at a particular place at a specific time. The problem arises when a customer asks for "a little more" service or a job

requires more time than you have allotted in your schedule. A service business is plagued with the problem of not knowing how much time a particular job will take or how long it will take to get from one job to the next, not to mention emergencies that must be "plugged in" between existing calls. I wish there was a simple solution that would relax the race we all run with the clock, but there just isn't an easy answer.

Service takes time. The only way to ease the pressure, is to call ahead. Use the telephone. Inform your customers that you "have to do an emergency call, but will be there shortly" or have had some difficulty, but will be there as soon as possible." If you're going to lose a call because you will be late, it's better to let your customer know in advance. Allow him the decision to either wait or get another locksmith. If you show up late and the customer is gone or has called another service, you've wasted a trip and probably caused ill will between your company and the customer. Most customers will be understanding and most jobs are not emergencies. All customers expect you to keep your promise, the appointment.

Don't start a job that is beyond the



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scope of your business. Every locksmith's dream is to get the contract on some building complex or large office park. That dream can go sour quick, when, because you're tied up, you have to turn down the easy money, your regular customer business. Even when the job is completed, how long will you have to wait to be paid. Can you carry the debt load for the job?

To relate an enlightening experience I had a few years back, I'll tell you the story of the "X-Y Commercial Development Corp."

One fine day, I was invited to their offices to bid a job that was in progress in a growing section of the city. An impressive office suite, with snappy secretaries and busy executive types, working on important projects. New desks and typewriters, drafting boards, and engineers busily making drawings for some doctor's new office.

"Come right in, we've heard that you're quite the locksmith. We want you to supply all the locks for our new building." I bid the job, the prices were right and the materials were ordered. Payment was to be made on completion of the job. What a break. Locks by Von Duprin and Schlage swelled the materials list. Hourly service rates and

master keying charges sweetened the profit margin on the job. I lost a few small potato jobs while I was tied up on the project, but I was in the big money now. The job was completed and I went to the office to present my bill, but Mr. X was away on business and there was not a check signer there to make out the payment.

"Leave your bill and I'll have him put your check in the mail as soon as he gets back." Who argues with pretty young secretaries? So, I left the bill and went on about my business. Thirty days later, not having received payment, I called to see if Mr. X had mailed my check. Mr. X was not in, but the secretary did say that my bill had been misplaced and would I please mail a copy so that they could make payment right away. She was terribly sorry, but with a business this size, every once in a while an invoice gets misplaced or lost.

A copy of the invoice was sent out the same day. Another thirty days went by, but no check. I zipped off a copy of the bill and did a service call on the way over to the X-Y Development. As I was entering the office, I noticed that the pretty young secretary was conspicuously missing. So was her desk and most of the other office equipment. I

had to step aside, to let a nicely dressed young man carrying a typewriter out the door. "Moving to a new office?" I inquired. "Moving hell," he snapped "I'm getting my typewriters back before they padlock this place. X-Y is history. You here to lock the place up?"

I was in the big money, but now the big money was the big debt. I was still on the hook for all the locks in that joint. Forget the labor, I was hung. Such a deal. It took a lot of small potatoes to pay for that experience, but there's a lesson in there for you. There's a good living in small potatoes.

Courteous service. One of the least expensive and longest lasting points of professionalism is common courtesy. A simple "yes ma'am" or "no sir" will leave the customer with an impression of you that will not only get you call back service, but recommendations to friends, relatives and acquaintances every time the word locksmith is mentioned. A simple statement to the customer, after the completion of your work should be, "Everything I have done is guaranteed. If you have any problem with the locks or keys, please give us a call." "Thank you very much for your business." Or, "Thank you for

Continued on page 82

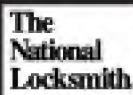
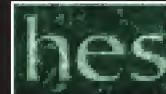


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Ideas profits

New &

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Following are a number of interesting ideas you might want to consider for your business. You should always remain open to new ideas and products that might help you profit more. Under each product item there is a Rapid Reply number. On items that interest you, circle the number on the Rapid Reply Card. You will then receive literature on those items which you have requested.

Inter-Lockit From Aable

Frank Markisello of Aable Locksmiths has designed a new cylinder protector, which incorporates an interlocking system, built into the back of this plate. The cylinder literally gets locked into the plate.

With this system, bolts and nuts are not essential to hold the plate to the door. All that is necessary is a one machine bolt installation, 5/16" diameter, which is installed from the inside of the door and tapped into the back of the plate.



Circle 277 on Rapid Reply

Aanon's Courier ATM-Type Safe

The "Courier" ATM-type depository safes from the Aanon Corporation resist fishing with two-tier anti-fish, one way 90 degree interlock movement. The 3½" opening allows for deposit and control of cash, receipts and envelopes.

For two-person responsibility and hold-up protection, Aanon recommends a dual key lock or key locking dial.

All doors in the "Courier" line are interchangeable.



Circle 278 on Rapid Reply

Abloy Introduces Tubular Deadbolt

Abloy Security Locks has introduced the 2700 series tubular deadbolts which feature a key-lockable thumb turn.

This new design offers the safety of a single cylinder and the security of a double cylinder. The lockable thumb turn unit even has an indicator for easy identification when locked. These new tubular deadbolts are available in popular BHMA finishes and can be used with all Abloy bolts.



Circle 279 on Rapid Reply

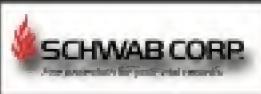
Abus Plus 37 Rekeyable Padlock

Abus Lock Company, recently introduced the new Abus Plus 37. This new rekeyable "Plus Secure" disc cylinder padlock features seven locking disks which provides a mechanism that make possible over 250,000 key changes.

The locking action is carried out by a bolt pin which secures the cylinder with its whole length. The 37 Plus is available with 1" or 2" shackle clearance.



Circle 280 on Rapid Reply

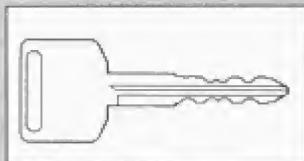


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Aero Announces Hyundai Tryout Set

Aero Lock is now producing the new tryout set #TO-42 for Hyundai "Excel" autos. The 64-key set will enable you to open the car and/or fit the key without removing any locks or impressioning from "scratch."

The set is arranged in eight groups of eight keys. A key can be made or the car opened by using a maximum of eight keys in the gas flap lock, and then eight keys in any other lock. Complete instructions are included.



Circle 281 on Rapid Reply

Chrysler Ignition Kit By ALS

American Locksmith Service has introduced the ALS-56, a Chrysler products ignition removal kit. The ALS-56 is designed to remove the ignition lock from Chrysler, Dodge and Plymouth cars and trucks 1970 through present, without having to disassemble the steering column.

All that is required for use is a drill motor, a straight slot screwdriver and an awl. Fully illustrated instructions are included.



Circle 282 on Rapid Reply

Audio Alert's Door Announcer

Audio Alert Systems offers the unique patented "Chime Alert" Door Announcer. It is magnetically activated and is maintenance free. (No wiring, batteries or electrical hookup.)

Due to more emphasis being put on security and prompt customer service, this pleasant sounding audio device can become a very good seller and profit producer.

This comes with a five year guarantee.



Circle 283 on Rapid Reply

Auto-Security's V-403 Versatile Vise

The Versatile Vises from Auto Security Products, offer rotating steel jaws which conform to almost any shape holding the object securely but without damage.

The Versatile Vise is available in two models, the no. V-401 4-inch drill press model, and the new no. V-403 portable model. The V-403 may be attached to the workbench by the end clamp, or a swivel base attachment is also available for permanent mounting. The Versatile Vises are guaranteed for one year.



Circle 284 on Rapid Reply

Briggs & Stratton's GM Lock Display

Briggs & Stratton Technologies announces the availability of an acrylic display showing all new General Motors "Handle Mounted" door lock designs.

The attractive display shows production sets for Pontiac Fiero, Chevrolet Beretta, 1988 Buick Regal and the new full size GM truck. Application data, part numbers for coded locks and lock service packages are shown.



Circle 285 on Rapid Reply

CCL Introduces The Re-Keyables

C.C.L. recently introduced a new series of re-keyable pin tumbler cabinet locks. A single set screw located on the barrel of the lock allows for easy removal of the solid brass cylinder and plug from the pre-assembled housing. Disengaging the retainer and use of a standard follower quickly removes the plug from the cylinder allowing for fast and efficient re-keying of the lock.



Circle 286 on Rapid Reply

Crimestopper Unveils Samurai™ Alarm

Crimestopper Security Products, Inc., will be introducing the new CS-8800 Samurai™ Remote Control Alarm System. The Samurai is a single channel, passive last door arming system with a 30 second exit delay.

The system, comes with two remotes, and features a short chirp to confirm arming and longer chirp to confirm disarming. A flashing LED indicates arming and an override switch provides a method to disarm the alarm. A remote panic feature is also included.



Circle 287 on Rapid Reply

DiMark Displays Help Sell Locks

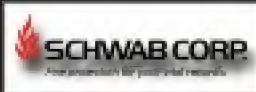
DiMark International makes it simple to sell their line of furniture locks by providing them on a blister-pack display.

The display includes 21 locks, some with their own special strikes, four different additional 'all-purpose' strikes, three sizes of brass keyholes and two antique-style escutcheons for either drawers or doors.

All items are labeled (without pricing) for easy ordering.



Circle 288 on Rapid Reply

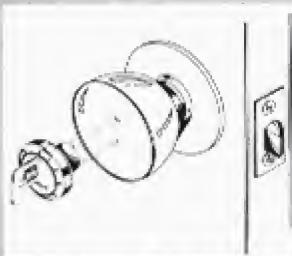


Electromagnetic Locks By G.N.I.

Guard-Nut, Inc., a designer and manufacturer of specialized security hardware, announces the Cypher Lock.

Cypher combines the high security of a combination lock with the convenience of a key. No larger than conventional key locks there is no key-hole in the lockface. Key and lock mate via a wide range of matching design configurations and communicate via electromagnetic forces.

Thousands of codes and combinations render the Cypher Lock pick proof.



Circle 290 on Rapid Reply

Jackie's Junction Attack Protection

A device to ward off attackers is available from Jackie's Junction. The Guardian looks like a flashlight, but when triggered, sprays a chemical that will stop any attacker in his tracks. It is ideal for everyone to carry in their pocket or purse.

This self protection device easily sells itself, and can be easy extra income for the locksmith. It is legal to carry, will not cause permanent harm, and is sold with a 100% money back guarantee.



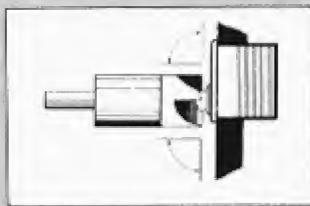
Circle 293 on Rapid Reply

The HPC Face-Off Cuts Cylinders

HPC has developed a new tool which can be used in conjunction with almost any portable drill to cut through most high security cylinders in less than two minutes.

The HPC Face-Off (No. FOD-1) is a uniquely designed precision ground carbide mill with a wide array of specially designed "live action" pilots, stainless steel guide springs, and comprehensive instructions.

The HPC Face-Off Drill Kit contains eight (8) different pilots, many of which are multi-functional.



Circle 291 on Rapid Reply

Major Mfg.'s Cap Removal Tool

The new cylinder removal tool from Major Manufacturing Co. is used to remove the cylinder cap from Schlage lock cylinders and dual-purpose by design.

One end of the tool is used to remove the threaded cap from any Schlage cylinder. The other end is used when the cylinder is in the knob.

This tool is part no. SCT-1 in steel-black oxide finish.

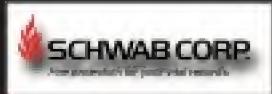


Circle 292 on Rapid Reply



SRI and Steve Young are working together to bring you the best in locksmith tools and supplies.

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Micro Security For Microcomputers

New hardware to protect data and prevent theft of the Mac SE microcomputer and associated peripherals is now available from Micro Security Devices, Inc.

The PC Guardian security device for the Mac SE uses a key to activate the Mac's on/off switch, reserving data access to key holders. The device also locks the CPU cabinet to prevent theft of computer boards. Additional PC Guardian security products are available to prevent theft of the components.



Circle 307 on Rapid Reply

Ortner's AutoCard® Offers Access Control

AutoCard® from Ortner Technologies is a high-security programmable card reader system designed to control access through gates, doors and other entries to restricted areas within any facility.

AutoCard contains a unique personal code incorporating non-corruptible infrared coding technology resulting in the highest level of card access security. The cards are standard credit card size and are easy to use as they can be put through the "swipe" reader in either direction or even upside down.

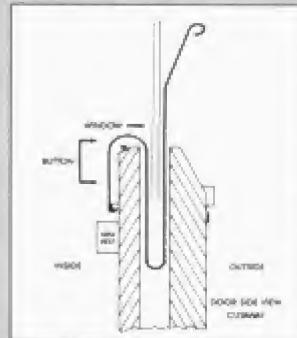


Circle 308 on Rapid Reply

Pro-Lok's New MCOT Car Opening Tool

A new car opening tool MCOT (multi car opening tool) has been introduced from Pro-Lok. The MCOT #1 for narrow door panels, and MCOT #2 for wide door panels will unlock many different models from different car manufacturers.

These tools will open a car up to 4 different ways: Lifting the vertical slide lock button, sliding the horizontal slide lock button, pushing the electric lock button, or pulling up the old style lock buttons.



Circle 309 on Rapid Reply

7500 ENR From Security Engineering

Security Engineering has just introduced its new #7500 ENR series keyswitches, featuring an ultra narrow width and backset, which allows it to mount within a 1½" I.D. square tube.

The #7500 ENR series accepts most 1½" or 1¼" key-cylinders, and is available in single or double throw momentary or maintained switch contacts, and a variety of finishes.



Circle 310 on Rapid Reply



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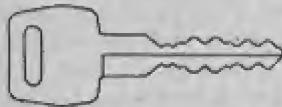


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So. State Tech. Ford Sidebar Kit

Southern State Technology has the Ford sidebar ignition lock beat. The kit includes a service manual, spring tool, and a neutralizing key.

The basis to the operation is to insert the spring tool into the ignition lock and separate the springs from the wafers. When this is accomplished and the wafers are pushed into the down position, insert the neutralizing key and tap on the lock to withdraw the sidebar. Turn the key and depress the retainer to extract the lock, to service or make a key.



Circle 303 on Rapid Reply

Superior Security's Release System

Security window guards are one of the most effective deterrents against forced entry. However, because of the fire safety hazard they create, many cities now require that emergency releases be installed.

An advanced release system is manufactured by Superior Security. It automatically unlocks the window guard with the use of a wireless transmitting smoke detector.



Circle 304 on Rapid Reply

Perfect Master III Program By Treskat

You choose the lock and the GGMK and Perfect Master III does the rest. It prints key charts with up to five levels of Masterkey control. It eliminates "phantom keys" and automatically identifies every key with an appropriate letter ID (GGMK, A, AA, AAC-3, etc.)

The software stores all key bittings on disk with ample room to enter the location and door. You know instantly if any lock has been installed, terminated or never used, and you can see which Masters have been issued and what they open.



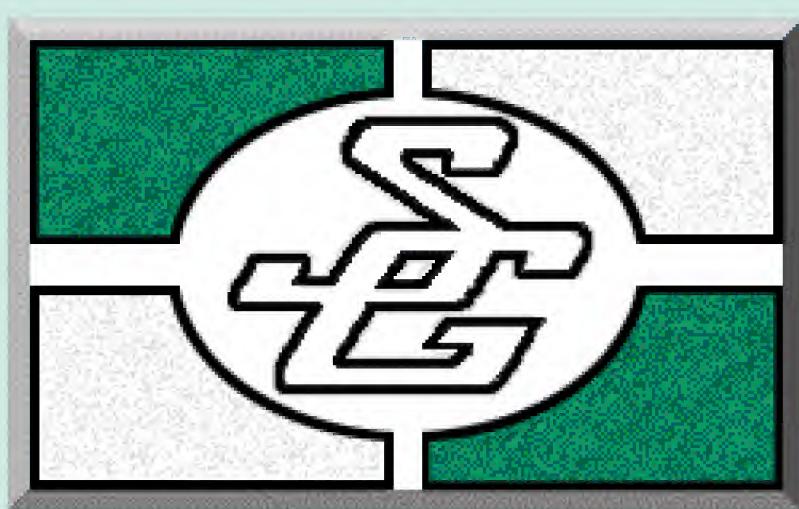
Circle 305 on Rapid Reply

Video Visions' Shows Opening

Video Visions has produced a videotape that shows how to open and fit keys for GM's Beretta and Corsica. General Motors has changed most of the locks on these cars and there are new parts and procedures involved.

The tape uses close-up photography to show how to open a locked Beretta in seconds, as well as the methods involved in tearing down the steering column and removing the ignition locks in both the tilt-wheel and standard wheel models. They make a door/trunk key from the new glovebox lock, and remove the disassemble a door cylinder.

Circle 306 on Rapid Reply



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Pro-Lok Locksmith Tools

"Detroit spends big dollars designing car doors to be impossible to open. Locksmiths then figure out practical ways to open them. Pro-Lok can help."

Locksmiths have a game going with Detroit car manufacturers. Detroit spends big dollars designing car doors to be impossible to open. Locksmiths figure out ways to make them practical to open. Over the past ten years, there have been many dramatic changes in the manufacturing of automobiles. And, therefore many new tools have been designed to meet the needs of the locksmith.

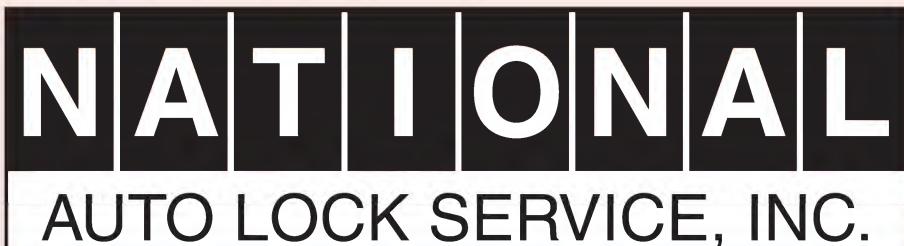
Pro-Lok, in the last few years, has established itself as a leader in the high quality tool market. They have a new registration program that will keep the locksmith on top of car openings. The program has only one objective; to keep you informed of new cars, tech-

niques and tools. All you have to do is fill in the registration card included with each auto kit and return to Pro-Lok. If you have already purchased one of their kits, you can write the company, and they'll send you a card.

When General Motors came out with their slide lock, Pro-Lok overcame it with the Slide Lock Tool. Now General Motors has come out with modular lock systems and Pro-Lok now has a tool for this. The MCOT #1 and MCOT #2. MCOT is the trademark of Pro-Lok which stands for Multi Car Opening Tools. The MCOT tools are made of a high grade spring steel, and are chrome plated for long life and easier entering and exiting of

the tool. The end of the tool has a baked-on rubber coated tip. This prevents the tool from slipping off of the lock buttons and also prevents damage to the door panel.

The MCOT will open many American and foreign automobiles and trucks, including the Beretta and Regal. The tool reaches down to unlock those deep down lock buttons. Four options to open an automobile with MCOT are to; pull up vertical up and down slide lock buttons, slide horizontal slide lock buttons forward, push the tool against electric lock buttons, or pull up a mushroom shape button (if the auto does not have a slide lock).



National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

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To use the MCOT, you first must insert a wedge in between the car window and the weather stripping. Next, slide the tool inside the door until the bottom of the tool clears the bottom edge of the glass. Slightly turn the MCOT towards the inside of the car, then lift it straight up until you see the end of the tool enter the inside of the car. Rotate the tool over the lock button and pull up or slide the button to the unlocked position.

A major advantage of the tool is that it bypasses modular locking systems. If eliminates hunting or poking for lock

linkages in a door panel because these tools bypass all this also. Since the tool enters the inside passenger department of the car you can actually look inside of the car to see what you are doing. Finally, no experience or special training is needed to work this quick and easy tool.

Pro-Lok makes other tools as well, including an economical lock and safe scope. Some of the uses for this scope would be: removing broken keys from locks, looking in a drill hole to dial open a safe, or reading the tumblers in wafer lock. This scope is sturdy and

lightweight, made of a tough impact resistant plastic. It uses a concave mirror to capture and focus light from a high intensity light bulb. The scope also comes with a non-breakable lens to magnify the image, a soft vinyl pouch, three different size viewing tips, and batteries. A satisfaction guarantee is given with the scope.



Pro-Lok products shown here.

Another product, no spill key hooks, are the answer to a problem long tormenting the locksmith. That is, falling and or lost key blanks as you drive around in your mobile vehicle. No one has to tell you how frustrating it is when you are 20 miles away from your shop and you reach up to grab a key blank and find your key hook empty. The cost of the blanks themselves and more importantly your time add up very rapidly. The hooks have a special end on them to eliminate them bouncing or shaking off.

Another problem this hook solves is space. If you have a hook with four key blanks on it and you open a bag of ten blanks and only seven of those blanks will fit what do you do with the other 3 blanks? Chances are you lose them or cannot find them when you need them. Pro-Lok's hooks hold 25-30 key blanks. This also saves space in your van from boxed key blanks. A lot of those boxes can be eliminated if your hooks can hold 30 key blanks.

Pro-Lok has designed two different key decoders. The purpose for the key decoders is to decode the depth of each cut on a key in order to rekey the locks with the proper size pin segments. Their decoders are unique because each decoder will decode four different manufacturers' keys. The KDI decoder

Continued on page 82

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High Tech Tools

"The car opening set made by High Tech offers a complete set of tools, along with manuals that have instructions and illustrations of almost every car door imaginable."

Years ago a locksmith could open just about any vehicle with a simple Slim Jim or similar tool. No other tools were needed and just about any car could be opened in just a few minutes or even seconds. If a locksmith was unfamiliar with a particular vehicle some simple probing around in the door was sufficient. With today's modern automobiles the situation has changed. The rising car theft rate has caused automobile manufacturers to develop high security locks and shielded lock mechanisms in order to keep the car thieves out.

Armed with the proper tools and information, the difficult task of unlocking these vehicles becomes sim-

ple. Again the problem is there are literally hundreds of automobile makes and models. Gathering the information, if it were available, would literally take several years. Some locksmiths devise their own methods, but doing so for every make and model available today is simply impossible.

The car opening tool set manufactured by the High Tech Tool Co. offers a complete set of tools, along with manuals that offer detailed illustrations of almost every car door you might imagine. The Model 1600 is designed to cover a vast variety of cars. The manuals list everything from all G.M. cars, Fords, Chryslers, Toyotas and Nissans and some Mercedes and

Porches. Even cars like Ferrari are included—the list is too extensive to cover here.

The Model 1600 consists of 13 tools and two manuals. The tools themselves are not much to look at, but they are made of steel and appear to be quite durable. The handles are color coded to make it easy to find the correct tool for the job.

The manuals are the heart of the set which is really a system. They are split into two volumes, one covers all G.M. cars, the other covers Fords, Chryslers and Foreign cars. The manuals are 8½" x 11". Each car has a full page illustration dedicated to it. The drawings show the inside of each car door. (See illus-

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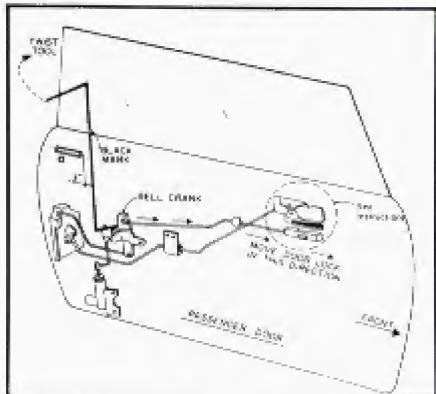


Illustration 1

stration 1.) All the necessary linkages are shown, and the tool is shown in the position where it is placed for unlocking the vehicle. Each vehicle also has a very brief set of instructions. The instructions could probably give more detail, but the manufacturer feels, that one picture is worth a thousand words. Apparently in this case they're right. In actuality one could look at the picture and unlock the car with no instructions whatsoever.

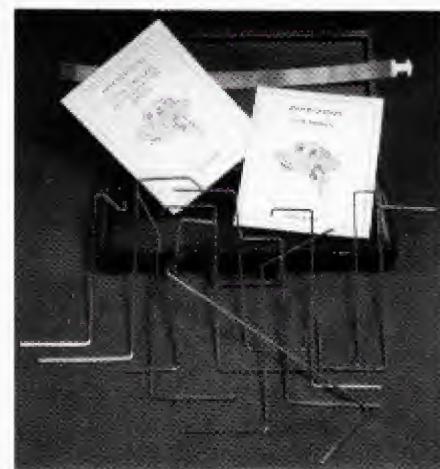
To open a car you first look it up in the index. Once you have found the correct page, the manual tells you what tool color to use. The tool handles are

color coded. A close look at the illustration shows you the linkages inside the door, and all important items like handles, inside and outside the car. The tool is shown in the position and angle at which it is to be used.

A typical set of instructions asks you to separate the glass from the weatherstripping. You are told in which direction to point the tip of the tool, and then it asks you to put the tool into the door. From there you are told how to move the tool. The illustration shows you position and angle. The arrows show which way to move the tool.

The tools are updated every year, to keep them up-to-date. This year's improvements include easier-to-use methods for the Chevrolet Beretta and Corsica, and a new Astro van method. All Fords, Chryslers, and many foreign cars were added. According to the manufacturer all this was a result of comments and suggestions from customers.

The company sells update sets to previous customers, so they won't have to purchase a complete new set each year. The updating and improvements made are very important since cars are changed by the manufacturer yearly, and the locksmith needs to be kept



A variety of High Tech tools.

informed. The manufacturer claims to offer continued support to its customers; customers are notified by computer of updates. According to the manufacturer most of their clients are satisfied, and prove it year after year by ordering update sets.

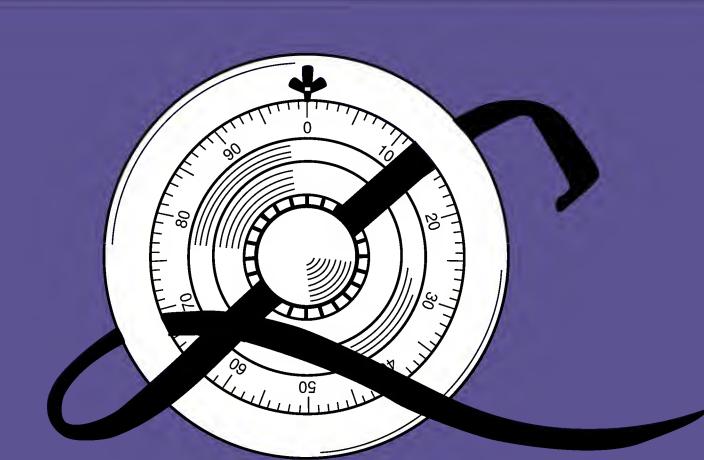
The set started out as only a seven piece set for GM cars in 1984. Since then the set has been updated and expanded yearly. New cars pop off the assembly lines every year, and High Tech Tools has been keeping up.

The tools are sold directly to locksmiths. In fact the manuals without any tools at all are worth more than the price of the set. The tools are offered with a thirty day unconditional money back guarantee, and a 1 year replacement guarantee. The tools have an optional carrying case. High Tech Tools is also offering other items, and a catalog is in the works.

The Model 1600 set sells for \$89.95. There is also a Pro 1600 which is chrome-plated and comes with a case and fancier manuals which sells for \$139.95. The chrome makes the set look better, but more importantly, helps prevent rust. The standard set works just as well but the case must be purchased separately.

In conclusion the Model 1600 is a very complete and effective car opening set. The tools though not pretty, work and work well. The manuals, though simple are complete, direct and to the point. The simple illustrations cover most every car on the road today.

For more information contact: High Tech Tools Co., Drawer 450370, Miami, FL 33145, (800) 323-8324 or in Florida (305) 444-6656. ■



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Servicing The Datsun

"We do at least five or six of these cars a week in our shop. Most of the problems are lock-outs or lost keys and there is usually a simple solution."

by Robert Sieveking

One of the most common foreign autos we are called to service is the Datsun. We do at least five or six a week in our shop. Most of the calls are lock-outs or lost keys, but the design of these locks also creates some special problems. Most with a simple solution, if you've seen them before. Having the key stuck in the "on" position is the most common. Bent wafers in the ignition and corroded wafers in the door or trunk locks also bring in a lot of business. Most of these problems could have been avoided by a little preventive maintenance or just having the keys cut by a professional.

I think one thing that creates business for the locksmith is Lock Thaw. The wonder liquid that "instantly" thaws frozen locks. The primary ingredients are alcohol and salt. The alcohol washes away the lubrication corrosion preventive grease in the lock and the salt corrodes and seizes up the lock. I can't help but chuckle every time I see the "Get set for Winter" caption on the display. All I can think is, "See you in the spring."

The second major cause of lock problems is the improperly duplicated key. The key that's "close enough," which will turn the ignition to the on position but not quite "close enough" to turn it back to off. Some customers that own more than one Datsun, find, that after a few years, one key will start both cars. The problem is, that this key will only turn one of them off.

So far I've named a few of the problems that you are likely to encounter with a Datsun. Some of these problems are common to other autos. Some of them unique to this brand. Locked out, lost key, locked out and lost key, ignition stuck in the "on" position (with and without the key in the lock), frozen lock and corroded door or hatch locks are all common everyday problems. Let's do a few calls that involve making a first key.

First call: Locked auto with key inside.

Solution: Pick to open, use slide lock tool to open. Make a first key from the lock by impression or reading.

Case: I've always found it important to ask a few questions before diving into a job. First and most important, in this case, "Has anyone else worked on the car?" If the answer was yes, that would mean make a key. If the answer was no, I'd check for signs of someone else working on the car. If you see grease or undercoating on the glass where you might put a slim jim, don't slim it open. Make a key.

About a month ago I was called to a local hotel. A young lady had locked her keys in a new Datsun. She explained that I was the first one to work on the car, but the signs didn't agree with her story. I made a key for the door, explaining that this was an extremely difficult model, only to find that not only were both lock actuators disconnected, but the handle actuator on the drivers side was disconnected also. After this discovery, she confessed that the hotel maintenance man, a nice policeman and a tow truck driver had all worked on the car without success for most of the morning.

A slim jim and flex light were used to open the passenger door with much difficulty and both doors were repaired with the charges being appropriate to the job. Had I jumped into the door without any thought, I might just have repaired those doors free. Look before you leap, sometimes the long way is really the best way.

The lock pawls on vehicles before 1978 are almost always free. Either slim for the lock pawl on the vertical button type, or go for the slide lock actuator on the horizontal slide locks, using a hook type slide lock tool. The single sided locks pick fairly easily.

Second call: Locked auto, keys lost.

Solution: 1. Read the lock for first key and open. 2. Impression a first key

and open. 3. Open the car and check glove box for code (or owners manual). 4. Open the car and remove a door lock for code or disassembly. 5. If the car was bought locally call the dealer for code.

Case: 10:00 a.m. the call came in. An '82 Datsun Maxima was locked up and the keys were lost. I had just finished my 9 o'clock call, and was almost to my ten. I detoured toward the Datsun, and radioed the secretary to slide my ten to ten-thirty.

As I proceeded to the call, I went over what was necessary to open and make a key for this car. Since the end result was that the customer needed a key, and I could make a key without opening the car, opening the car would be a waste of time. Time was the thing I was a little short of right then.

From 1970 to about 1982, Datsun used the X-6 or X-7 Taylor blank. Some of the later luxury models used the X-114 or X-115 as a master blank for the glove and trunk. Code series "M" and "N" are the rule for these blanks. There are six spaces and four depths, and the door lock contains all the wafers. The fastest method to make a key for this car would be to read the door lock and cut the key. If the car was open, I'd check the glove box for a code slip. Datsun is pretty good about putting the code on the inside of the lid. Though sometimes I think the guy that's filling out those little slips probably writes better in Japanese.

As I pulled up to the address, I saw the Datsun sitting at the curb. Going out the back of the truck, I grabbed an X-6 and an X-7 key blank off the key board and tucked the otoscope under my arm. I reached the car just as the customer was coming down the walk. "Morning Ma'am, is this your car?" She informed me that this was in fact her car and that she was almost two hours late for work. Just make the key and hurry. "Will this be cash, check or charge card?" She said "cash" and



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asked, "How long is this going to take?" Checking my watch, I told her just a few minutes and got down to business.

I checked the keyway with a blank key and found the X-7 to be the correct blank. Using a spring door tool I blocked the shutter open and inserted the reader tool into the lock. It took about a minute to read the tumblers with the otoscope, and I was on my way back to the truck to cut a key.

Using a code cutter, one side of the blank was cut to fit the car. Returning to the car, the key was tried in the door. What a day, fit the first time. The key was then tried in the ignition which gave the same result, worked just like new money.

As I returned to the truck, I tried the key in the opposite door and the trunk. The key would not enter the trunk lock. This car must use a master key. An X-114 key was cut using the X-7 as a pattern and the key tested in all the locks. The X-114 key will enter all locks. If an X-7 is used, it will open the door and operate the ignition, but will not enter the trunk or glove box. A little shot of spray oil in all outside locks, and it was time to write the ticket. Elapsed time, about 9 minutes. Wish I could get calls like this more

often.

Reading wafer locks is not as difficult as some would have you believe. Like anything else, it just takes a little practice and some specific knowledge of the lock at hand. In this case, we knew that the Datsun used an X-7 (mastered by the X-114) and there were six cuts and four depths.

Wafer locks for the most part, all use the same basic design or principle of operation. Illustration 1-A shows a cut-away five wafer lock, in the locked condition. Note that all the wafers are

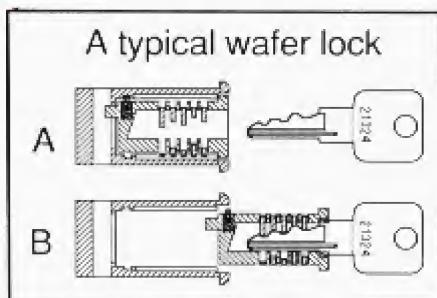


Illustration 1

spring loaded in the downward direction and extend into the lower wafer compartment. By comparing the relative positions of the keyways (in the wafers) to the cut key shown, you will

see that their position in the lock, with the lock in the locked condition reveals their actual cuts. If the proper key were to be inserted into the lock, as in illustration 1-B, all the wafers would be raised to the shear line, allowing the plug to be turned.

Illustration two is representative of the wafers contained in this lock. They

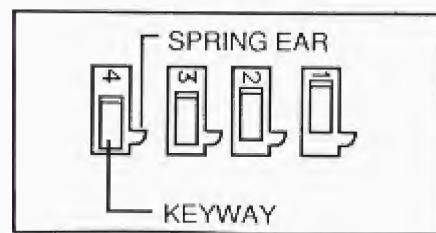


Illustration 2

are all exactly the same size. The only difference is the "position" of the keyway. The number four wafer has the keyway displaced toward the top of the wafer and would require a deeper cut in the key to properly position the wafer at the shear line. The number one wafer has the keyway displaced to the bottom of the wafer and would need only a shallow cut in the key to position the wafer at the shear line.

How do we look into the keyway, and what should we expect to see? A



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pair of tools that will greatly simplify your reading are the reader tool and a spring door tool. Illustration three shows a simple reader tool that I've had good luck with. It was made from a medium weight tension wrench and is shown actual size. The tool is strong enough to hold all the wafers down at the same time.

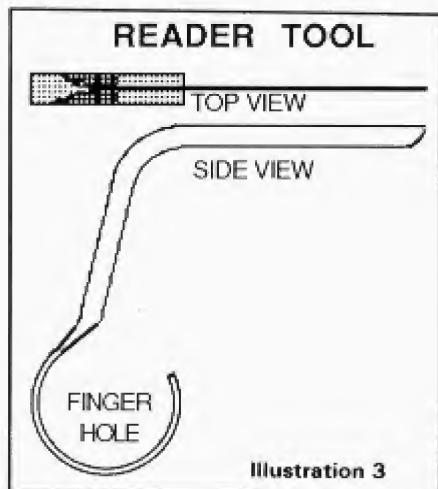


Illustration 3

The second tool is a spring door tool. (See illustration 4.) It is used to hold the shutter or spring door open while reading the wafers. It too is made from a piece of spring steel that began life as

a tension wrench. (Cut the fine notches with a Dremmel cut off wheel.) Tension wrenches, though a little expensive, are a fine source of spring steel. Flat spring assortments, sold by the pound, give a wider variety of sizes and are more economical.

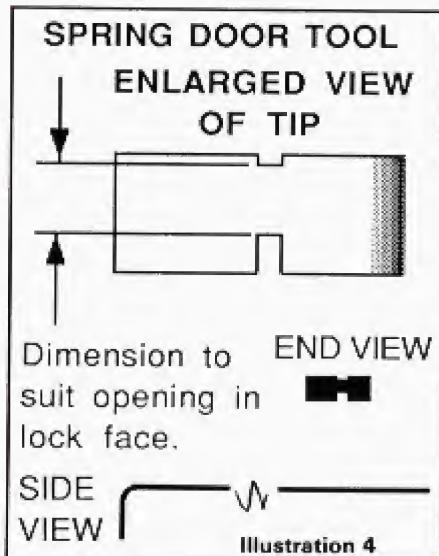
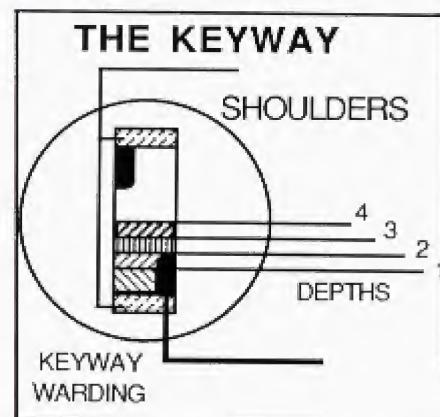


Illustration 4

A good quality otoscope is almost a necessity, if you're going to read these locks with consistent success. Though I learned with a simple flashlight, the

magnified view and high intensity light will help you read with greater accuracy.

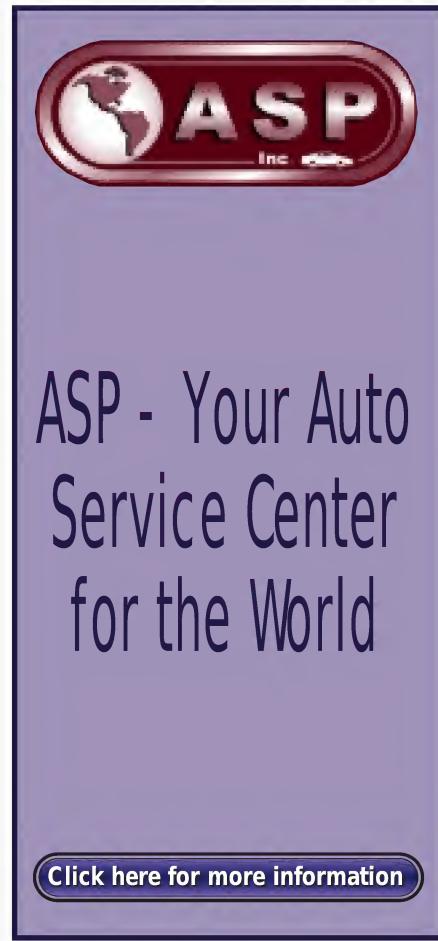
What should you see as you look down the keyway? Illustration five shows a view of the Datsun keyway. In the upper left and lower right corners



of the keyway are the major key wards. These determine what keys will enter the keyway. The keyway shown is a door lock. The trunk lock will contain additional wards to exclude the X-7 key but allow the X-114 to enter.

As you look deeper into the keyway, you will see four lock wafers. They cor-

Continued on page 83



46 The National Locksmith



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Yale Removable Cores

"This system is remarkably simple when compared to other core systems since there are no complicated formulas to learn regarding pin stacks."



Send your lock and key questions to Jack Roberts, The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.

by Jack Roberts

There seems to be an ongoing controversy among locksmiths regarding the wisdom of selling a system that offers the customer the ability to change combinations of a particular lock with the slight twist of a key and replacement of the core. Many opponents argue that we are cutting ourselves out of business when we place

this convenience in the hands of the customer.

Proponents don't hold to this theory at all since the cores do require service on occasion, keys do get lost or stolen with these systems as well as any other. And new combinations must be created from time to time. Many locksmiths, particularly those in the early years of learning the mysteries of our profession, had their first experience with interchangeable core cylinders when they encountered a Best Lock system of key control.

This is always a frustrating time for the uninitiated person with limited knowledge when it is discovered that

help and assistance are not available from Best. Non-aggressive people will walk away from a potential job of servicing a Best system due to what appears to be an overwhelming inability to break into the system. Others, with determination, find that the Falcon Lock Co. interchangeable system is compatible with Best, that keyways from both systems are the same, and that Best cores can be replaced with Falcon cores.

The next step is learning the pinning configurations that are involved with cylinders of this type. Special tools and pinning kits are required and complete knowledge of the theory of pin stacks is



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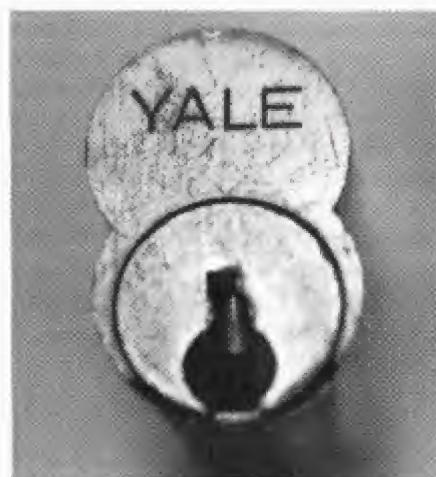


an absolute necessity. *The National Locksmith Guide To: Interchangeable Core Service* is one of the only books to completely cover this subject. A problem often arises, however, when our new found knowledge is not applied on a daily basis and over a period of time the fine tuning becomes rusty and the next encounter requires some relearning in order to be efficient and cost effective in doing the job.

The Yale Removable Core system, while perhaps not encountered as often as Best/Falcon, is remarkably simple when compared to those systems since there are no complicated formulas to learn regarding pin stacks, no adding things up to equal 23 in each chamber, and no special tools or pinning kits are necessary. If a locksmith is capable of repinning and servicing a regular paracentric cylinder, the Yale Removable Core cylinder will offer no challenge at all. (It should be noted here that while the term "Interchangeable Core" (I/C) is used by some companies, Yale uses the term "Removable Core" (R/C) which will be used in this article although the two terms are synonymous.)



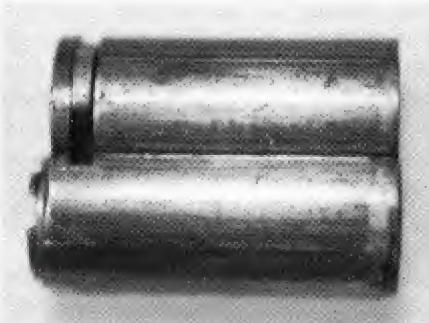
1. Shown are the control key (top) and operating key (bottom).



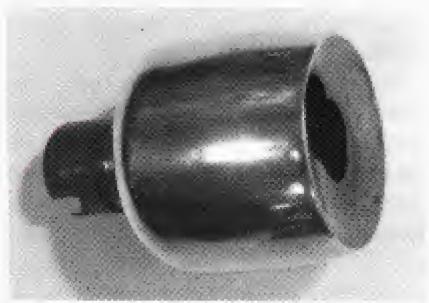
2. The Yale R/C with its figure eight appearance.

separate control key can be created by additional biting.

Yale R/C cylinders and cores are available in six pin (see photograph 6),



6. Six pin R/C cylinder and core.



7. Brandywine knob design.

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With the Best/Falcon system the control key shear line is established by the pinning, or pin stack, of each chamber and in a sense, the control key is a type of master key since it could be used to gain access if an operating key were not available. Control key calculations and pinnings are eliminated with the Yale R/C system since the control key can, in reality, be established with any operating code in the system. This possibility exists due to the fact that the control key is created by using a blank that is one bitting longer than the operating keys of the system with a number one cut at the tip of the key. (See photograph 1.)

If a Yale R/C system is to be master keyed the control key will normally have the same cuts as the highest master, but with the extra number one cut at the tip. The Yale R/C has the same figure eight appearance as Best/Falcon and others, (see photograph 2) but consists only of the plug and the housing. (There is no additional sleeve for control pins.) When the control key is inserted the tip cut raises a spring loaded pin into a recess in the retainer. (See illustration 3.) Turning the key to the right, (clockwise) about 10 degrees,

to the one o'clock position retracts the retainer (see illustration 4) and allows the core to be removed, replaced by another or rekeyed and replaced.

Servicing the core is much the same as with any paracentric cylinder. The "C" clip is removed from the rear of the plug, the plug is turned to the left (counterclockwise) to about the 11 o'clock position and, using a follower, the plug is removed from the housing. It is important to note that plug removal should be performed as described, a few degrees turn to the left, otherwise there is a possibility of trapping a driver in a recess on the tip of the plug.

Normal pin tumbler cylinder service can now be performed in the routine manner. A slotted screw head is visible on the end of the core housing (see photograph 5) which, at first glance,

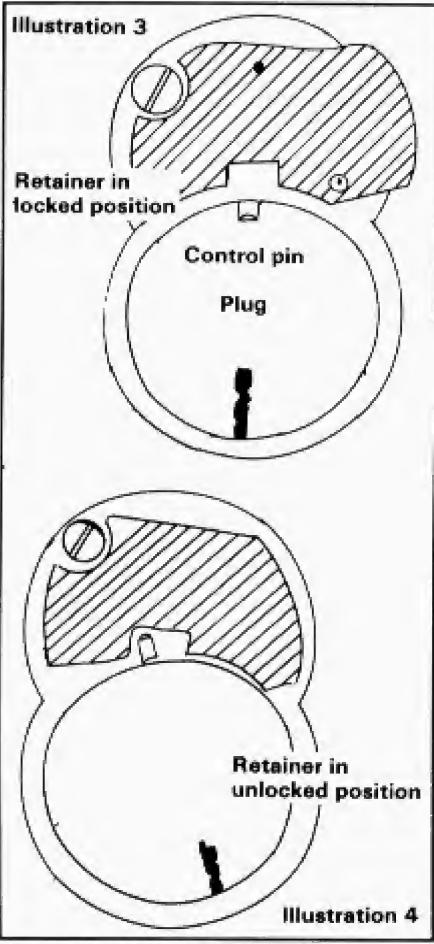
appears to play a significant part in the disassembly procedure. It is not necessary, nor is it recommended that this screw be removed for servicing of the core. Its purpose is to stop the movement of the retainer when it is turned by the control key.

The retainer is held in its locked position by a spring loaded pin which enters a detent in the retainer. The end of the detent pin can be seen in photograph five. It should not be necessary to attempt removal of the retainer or the detent pin. Reassembly of the core after service, repinning, etc. is the reverse of removal with particular attention to the proper position of the plug as it is inserted into the housing, (i.e. 11 o'clock).

Yale "C" clips are known for their tendency to stretch when they are removed and it is good professional practice to have a supply of new clips and always replace the old with new. If combinations have been changed it may be necessary to cut a new control key, which will be one bitting longer than the operating keys of the system. Although the general practice, as noted above, is to create a control key from the highest master key, an entirely recommendation of a new system of security control for a customer would be well advised to further explore the flexibility and simplicity of a Yale R/C system. Yale R/C cylinders are available with any of the Yale key sections, paracentric and surety, which adds up to a large selection of 86 keyways to choose from.

Selling removable core convenience and security to a customer who is particularly cost conscious can blow away the competition since it is not necessary to use R/C cylinders throughout a facility. If, for instance, a system were to be set up using the "GA" keyway, there can be a mix of regular and R/C cylinders used. The customer does not have to purchase an R/C cylinder for use on a broom closet door. Existing Yale systems can be equipped with R/C cylinders in those areas where interchangeable flexibility is required. The only consideration is that the keyways and cylinder length must be the same.

Complete information and assistance is available from Yale customer service by calling (800) 438-1962, Ext. 286. ■



5. Slotted head screw visible on core housing end.

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Humor:

'Smithing On a Computer

"The wife has a mind for this sort of thing so she held my hand while I learned the basic operation of this creature from another planet. I decided to make a pie chart!"

by Joseph Locke

A lot of past issues of the locksmith magazines have talked about using computers in the locksmith shops. I have been a die-hard pencil man for the most part, and I resist progress whenever possible. I have read locksmith magazine issues that are thirty years old. They were predicting back then that keys would be a thing of the past...which means we shouldn't have been cutting keys since 1968. We were supposed to learn electronics or we would be left in the dust. I have bought a lot of stuff with that dust, and I still don't know that much about electronics.

The world turns, and pretty soon the heir to your fortune starts whining that he wants a computer so he can do his homework as fast as the other kids in his class. Having been the spoiled brat all his life, he of course has not learned the meaning of the word "No!"

Shopping at the computer store is like buying a new car, only with more "options." It is wonderful to discover your good fortune in being just in time to buy the newest, most user-friendly state-of-the-art software, that will of course be obsolete as soon as the next freighter arrives from Tokyo.

"Why do I need a computer?" I asked the salesman.

"Because everyone is buying them," he replied.

Faced with that logic, I relented and bought what Junior informed me was the only set-up that could do his new-math homework.

After a few plugs were plugged and a couple of circuit breakers reset, we hooked this expensive keyboard to the TV. Junior informed me that I was no longer needed, and that I should go about my business and he would let me know if he needed further assistance.

"Maybe we'll do the lunch thing, Pop," he said as he pushed me out of his room.

I returned hours later and peeked in to watch my young Einstein earn col-

lege credits by the age of thirteen. To my dismay I heard the sounds of electronic missles exploding and the death cries of little orange monsters as they attempted to blow up a ship on the TV screen.

"So this is homework!?" I yelled as he ran screaming for his mother. After being told what a brute I was and how upset I had made Junior, I decided to try to master the science of computers.

One thing they don't tell you before you sign the check is that you have to learn all kinds of symbols in order to use the dumb thing. The letters are all funny-looking, and the manual is about 3000 pages of..."Refer to sub-chapter B paragraph 1a section 2c-4."

The wife has the type of mind for this sort of thing, so she held my hand while I learned the basic operation of this creature from another planet. The first thing I needed to do was figure out what I was going to use the computer for. After counting key blanks and setting up a masterkey system or two, you find yourself wondering what to do next.

"I've got it!" I said to myself. "I'll make a pie chart!"

Every computer ad I have ever seen has had a pie chart, and by gum I was going to have a pie chart too. I told the wife my idea, and she was very enthusiastic.

"That's the dumbest thing I've ever

heard," she said encouragingly.

Armed with her support I knew I would succeed. I looked up "pie" in the manual and it showed a symbol that looked like a mushroom.

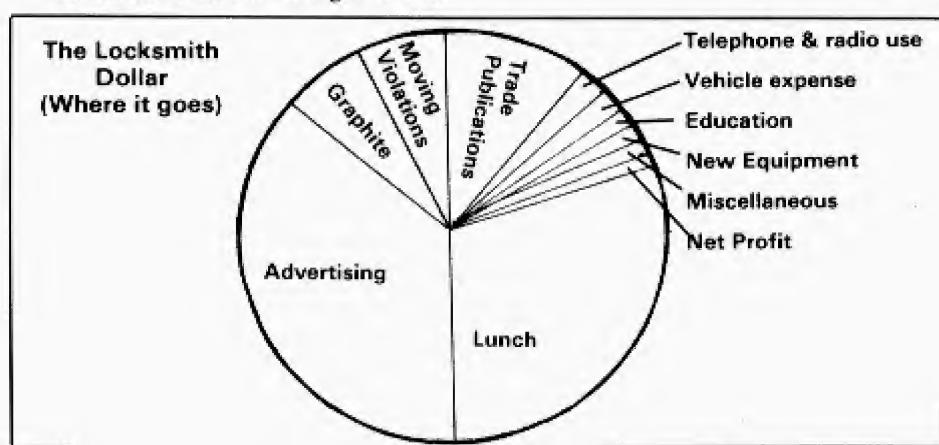
"Hmmmm....," I thought to myself. I've never heard of a mushroom pie."

The wife rescued me again, and showed me how to set up the chart. The one problem I was left with was what to put in the chart. I finally settled on the breakdown of the locksmithing dollar, because my customers are always politely asking me to explain my modest compensation for services rendered.

"You want fifty dollars for two seconds of work! How can you justify that you crook!?" they yell.

They don't understand the amount of overhead we locksmiths have to contend with, and the amount of training that is needed to be proficient in our craft. I made up a bunch of copies of the chart, and when a customer starts showing signs of yelling fiscal rape, I hand him the pie chart and while they are reading it I drive off as quickly as possible.

The chart has worked very well for me, and I thought that other locksmiths might benefit from the idea, so I am including my chart with this article. You have my permission to use the chart as is, or you can make it fit your own particular circumstances. ■





The National Locksmith

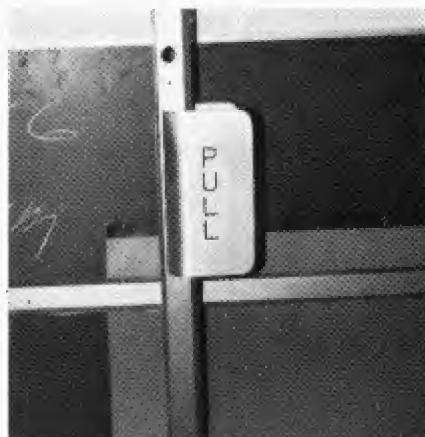
Retrofitting Adams-Rite

"I was faced with installing an Adams-Rite in a door which had previously contained a Detroit Lock. We had to do some modification to the door to make this work."

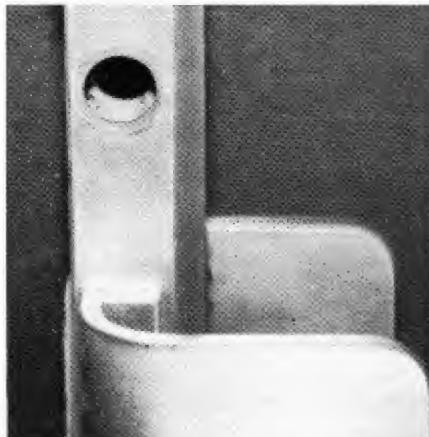
by Steve Spiwak

Most locksmiths are familiar with the standard procedure for installing an Adams-Rite deadlatch or deadbolt lock into a glass/aluminum door. However, the other day I was presented with a situation which was rather unusual. So I thought that I would relate my experience to you.

I was faced with the situation of installing an Adams-Rite deadbolt into an old style glass/aluminum door with oversized push plates and handles. (See photograph 1.) Previously this door had contained a Detroit lock. (See photograph 2.) While it is true that there are other replacement locks available



1. Special oversized door, brought into our shop.



2. Close-up of door. Note odd backset characteristic of these locks.



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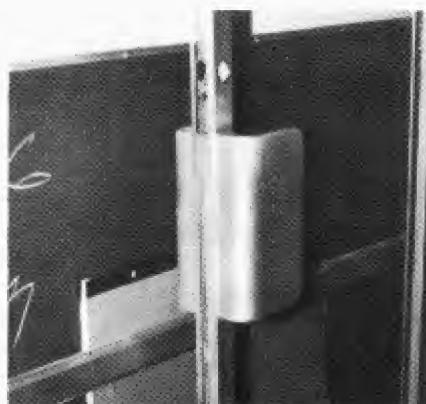
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that may have been dimensionally closer to the Detroit, the Adams-Rite brand was stipulated according to strict builders' specifications.

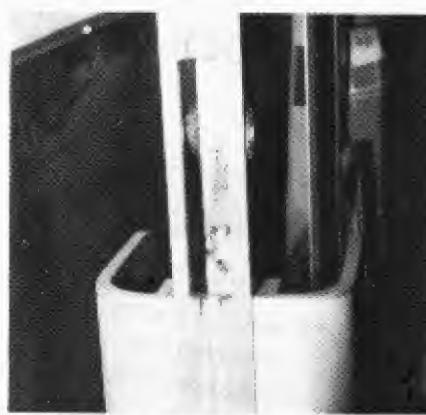
Upon closer inspection of the cut-out, I realized that with some basic modifications, a conversion could be carefully made so that no one would be able to tell that it was not an original Adams-Rite installation.

The first step was to enlarge the face plate opening. The width of the door was $1\frac{1}{4}$ ". The width of the existing opening was 1". (*See photograph 3.*) The overall length of the opening was $5\frac{3}{8}$ ". The width of the lock face opening was the same, but the overall length was approximately $1\frac{4}{5}$ " too short. I measured for the new length and marked the appropriate corner drill points. I then used a $\frac{1}{4}$ " bit to drill the corners. Finally, I took a jig saw and carefully followed the lines I had drawn freehand to cut the new opening. I carefully filed and sanded the newly cut areas until the opening looked like a pre-cut factory installation. (*See photograph 4.*)

Now I was able to insert the lock and concentrate on the backset problem. The backset on this lock measured $\frac{3}{4}$ ",



3. One inch opening in existing door.



4. Opening filed and sanded to resemble pre-cut factory installation.



5. Hole saw and pilot used to modify backset.

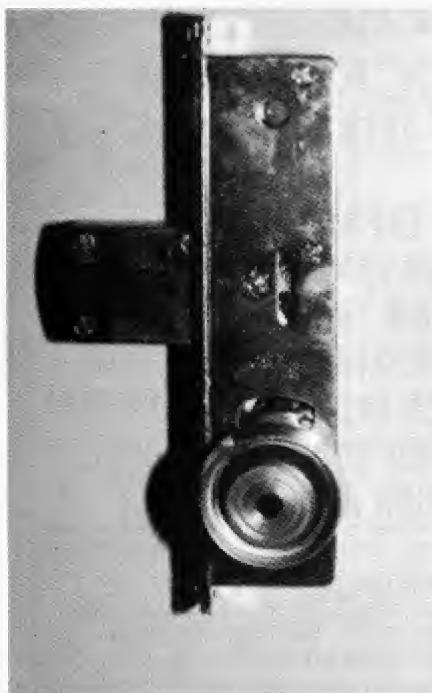
and the closest backset available for the Adams-Rite lock was a $\frac{5}{8}$ " backset. Therefore the first step was to make the $\frac{3}{4}$ " backset accept the new $\frac{5}{8}$ " backset which would be suitable for the new Adams-Rite lock. I took the standard Adams-Rite installation kit and removed the hole saw pilot. (*See photograph 5.*) I did this because I wanted the new extended hole to look as cosmetically perfect as possible. The hole saw pilot has a significantly smaller diameter and proved to be the perfect device for centering and drilling a new hole at $\frac{5}{8}$ " backset position. (*See photograph 6.*) I repeated this procedure on the other side as well.

I inserted the new mortise cylinder on the outside and the mortise thumb turn cylinder on the inside. I tightened the set screws, securely tightened the faceplate. I now looked at the jamb.



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6. Smaller diameter allows the hole saw pilot to fit into existing hole to increase backset from $\frac{3}{4}$ " to $\frac{5}{8}$ ".



7. Connecting bolt which was used to support the oversized push plate and handles.

and proceeded to drill the holes. I then connected them. I filed and sanded until a moment later the jamb resembled a pre-cut factory installation.

It was then that I remembered something that my father had always said to me. "Son," he said, "when something seems too good to be true it usually is." And so it was true in this case. I have a habit when I install Adams-Rite locks. I always leave the bolt in the locked position until I am done and am ready

Marking the jamb freehand was easy. I then used the same procedure to mark the four corners of the jamb opening

to test my work. It was then that I realized that the push handles on this "unique" door were held together at least at the top by a through bolt which obstructed the deadbolt. The deadbolt could indeed remain out in the locked position, but could not be returned to the unlocked position. (*See photograph 7.*)

I carefully removed the bolt from the upper portion of the push handle case and found that it still held the handles together. I then realized that the solution to my problem would be simple. I would just redrill a hole through both push plates and use a chrome plated self affixing bolt, much like the ones used on door viewers.

The final step would be to drill the strike hole further into the jamb to compensate for the difference between the old style Detroit square bolt and the modern Adams-Rite swing-type deadbolt.

Now the bolt could lock and unlock in an unobstructed fashion, the push plates and handles were secured, and the customer had a factory perfect installation in Chicago despite a conversion which started all the way from Detroit. ■



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Door Closer Installation

"Installing surface applied door closers is one of the more profitable ways to spend your money in this trade. Done properly, an installation should be call-back free."



by Don O'Shall

Installing surface applied door closers is one of the more profitable ways to spend your time in this trade. Most installations can be properly accomplished in less than half an hour, and are virtually "call-back" free. Since one of the first things we all learned in this trade is "call-backs cost money" that is

an important consideration.

Of course, I said they could be *properly* accomplished in less than half an hour. They can be slapped on in less time yet, in which case they become one of the most call-back prone devices ever. Proper installation is essential to their correct operation.

Installing them properly is largely a matter of looking before you leap. I have watched many would-be installers pull a closer out of the box, line it up visually, and start drilling holes. Others pull the template set out of the box and, without reading it, mark and drill.

Yet the template is a *must* for proper installation. Differences in fractions of

an inch can affect the operation of the closer. And choosing the correct template is vital also. Most closers come with three templates...one for each of the basic mounting methods.

The standard method of mounting a closer is regular mounting, in which the body of the closer is mounted on the pull side of the door, and the foot bracket is mounted on the frame. If the top rail of the door is not sufficient to allow the closer to be mounted to it, a drop plate can be used, which is mounted to the door, and to which the closer itself is mounted. Regular mounting, (or regular arm, as it is sometimes called) is the preferred



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method of mounting because it is the most mechanically efficient, giving the best over-all door control.

Regular mounting though, is not always practical. On outswinging exterior doors, for example, the regular mounting method should be used. On interior in-swinging doors, the placement of the door in relation to walls, etc., may make it at least inadvisable in some cases. For architectural integrity (not how honest architects are...how the hardware picture fits together over-all) it may not be acceptable to have closers where they are highly visible, or

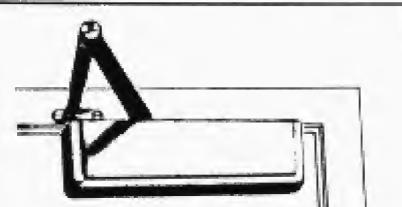
where the arms will stick out into view, obstructing the architect's image of how an office or hallway should look.

In cases like these, a different method of mounting may become necessary, which brings us to the next method of mounting...parallel arm mounting.

Parallel arm mounting allows the closer to be installed on the push side of the door instead of the pull side. A special bracket called a parallel arm shoe plate is attached to the underside of the door frame, and the closer's foot bracket is attached to this. The arm of

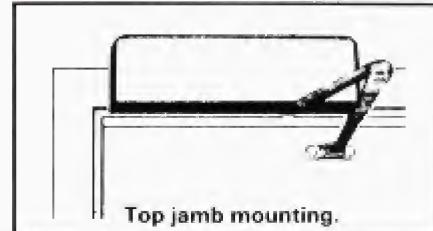
the closer will lie just slightly off parallel to the door, from which the method's name is derived.

The parallel arm mounting is preferred by many architects because the arm is far less visible than in regular mounting where it sits almost perpendicular to the door (*see illustrations one and two*). However, what is gained



Regular arm mounting.

Illustration 1



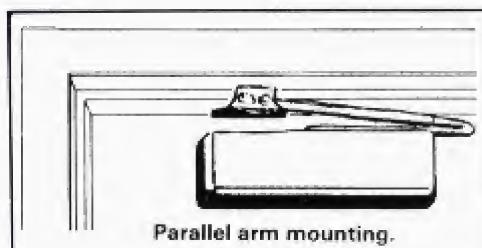
Top jamb mounting.

Illustration 2

in appearance is lost in mechanical efficiency, possibly with as much as 30 percent of efficiency lost. For this reason, most manufacturers recommend installing one size larger closer than would have been used for regular mounting.

Another consideration is the fact that the parallel arm mounting method leaves the closer on the door, so that when the door is opened, the body of the closer goes with it. If the door involved is an outswinging exterior door, this exposes the closer to weather conditions which may affect its performance.

The third, less popular method, called top jamb mounting, solves this problem. In top jamb mounting, the body of the closer is mounted to the frame, and the foot bracket is mounted to the door. (*See illustration three.*) This allows the closer to be mounted on the push side of the door, and yet remain relatively free from exposure to



Parallel arm mounting.

Illustration 3

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weather conditions. One drawback of this method is that most frames will require adaptor plates or drop plates to which the closer may then be mounted.

Since few, if any, manufacturers include them in their basic door closer packaging, this means something else for you to order and stock. Today, most manufacturers do include the parallel arm show bracket, however, due to its popularity as an installation method. More than anything else, the ready availability of the parallel arm bracket as opposed to top jamb mounting plates probably accounts for the relative scarcity of top jamb installations, in spite of their advantages.

Once you have chosen the method of installation you will use for a particular job, you can locate the template for that method. Your next consideration will be the extent of door swing. Most commercial office doors swing open approximately 100 degrees, and most exterior doors swing open 135 degrees, but many other variations are also possible, and this affects the placement of the closer on the door. The farther the door is intended to swing, the nearer to the hinge corner the closer must be located.

If the closer were mounted too far from the hinge corner, the arm would be fully extended before the door was fully opened. Since closers generally operate on a rack and pinion principle, the internal parts of the closer can only be moved to the end of its track. As the door continues to the open position, these parts are forced to try to extend even more, resulting in wear and damage to them.

On the other hand, closers that are mounted too near to the hinge allow the door to be opened farther than was intended, which can strain the hinges or damage the door.

The template will give you guidelines as to where to locate the closer for proper operation at different amounts of door swing. Always double-check this to make sure you are using the correct set of measurements.

If your template does not give more than one set of measurements, it will specify a maximum degree of opening for each mounting method. Make certain that your application fits within these guidelines before marking and drilling holes. Since the highest degree of skill required in this type of installation consists of selecting the proper method of mounting and taking the appropriate measurements for that method, your time in reading the tem-

plate or installation instructions is well-justified and well-spent.

If you are installing a handed closer, you will also have to make certain that the hand of the closer matches not only the hand of the door, but also the mounting method. Most of the surface applied closers on the market today are "non-handed," however.

Your next consideration will be the size of the closer, which refers to the size of door that the closer is capable of handling. Generally, surface applied closers range from a size 1 or 2 to a size 6. Not every manufacturer makes the full range of sizes available, of course.

Because the size of the door a closer can control is usually based on the spring arrangement within the closer, the larger the door the closer is intended to handle, the larger the body of the closer will tend to be.

This means that after you have selected the proper template for mounting the closer in the method you chose, and after determining the swing of the door, you must then choose from up to six sets of measurements, based on the size of the closer. If you get the wrong set of measurements, at best the closer will not function properly, and in fact, may not even fit on the door without redrilling the holes, which also means patching the old ones.

Of course, not every closer on the market requires such an intensive search for the drilling measurements. Universal closers, such as the LCN Super-Smoothie, are non-handed and non-sized for ease of installation.

With these, once the mounting method has been selected, the template becomes simple. Neither the swing of the door nor the size of the door affects the template. This means there is only one template for each of the three methods, rather than having to select from two sets of measurements based on the swing of the door for each of up to six sizes. This generally results in a faster and more professional installation, with fewer possible problem areas.

Once the measurements have been taken, the installation process is largely a matter of drilling straight holes. If you are using through-bolts (or sex-bolts, as they are commonly referred to), the holes will go through the door. If you are dealing with a wood door and using through bolts, do not go straight through the door with the full size drill bit. Instead use a smaller bit to go through first, and then the larger bit. This reduces the possibility of

wood splits in the area of the through bolts, which greatly detract from the appearance of your installation, and make it look nothing like that expected of a professional.

Use the size of holes called for on the template if you are not using through bolts. If you are installing on metal doors, tap slowly and carefully. Breaking a tap off in the only area where you can properly install a screw for the closer is going to slow your installation down, and cut into profits.

If you are installing a universal closer such as the Super-Smoothie, your final step will be to wind the spring the number of turns called for in the template for that size of door.

Then check the door for proper operation in your particular situation. An average closing time for a door closer from the full (90 degrees) open position to fully closed position is about 5 to 7 seconds. However, for certain applications you may want to speed this up or slow it down slightly. On the door to a doctor's office where you might see people on crutches needing to use the door, for example, a slower time might be indicated.

Installing door closers is simple and profitable, if you let it be. Professional techniques and attention to detail make the difference.

For more information on the LCN Smoothie contact: LCN, 121 W. Railroad Ave., Princeton, IL 61356, (815) 875-3311. ■



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	HON44RAP				
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	HY2 / X160 Hyundai Excel		HY3 / X161 Hyundai Stellar (Canada only)		B59 / X162 Cadillac Allanté Door/trunk/glove box
	1515 MEDECO® 5 pin Commercial		A1515 MEDECO® 6 pin Commercial		321668 A 321670 C 321669 B 321674 D

Shop Talk

Helpful Questions and Answers

Written by all of the following authors: Robert Sieveking, Jack Roberts, Steve Spiwak, Don O'Shall, Shirl Schamp, and Dave McOmie.

Send your locksmith questions, along with a self-addressed stamped envelope to: Shop Talk, *The National Locksmith*, 698 Bonded Pkwy., Streamwood, IL 60107.

Q: I have an 8088 Sargent & Greenleaf combination padlock which I cannot open.

I drilled a peek hole in the front right over 5. I can see the tumbler, and can line them up, but I am not sure of the first one near the front.

I am not sure which way to turn the lock LRL or RLR.

I was told to add 5 to each number, as the tumblers came in line. Is that right?

*John Stahl
New Jersey*

A: The S&G 8088 combination padlock is a very popular padlock with the U.S. Government. It is used primarily to protect classified or confidential material. The design and finish, painted or chrome, are such that any tampering with the lock will be easily detected. The 8008 is a three wheel, changeable combination, manipulation resistant padlock. Once drilled, this lock is of no commercial value. But, if the owner is not using the lock to protect

classified material, the following is an easy and in most cases satisfactory method of opening and restoring the lock to service.

The proper dialing sequence for this lock is:

Turn left 4 times to _____

Turn right 3 times to _____

Turn left 2 times to _____

Turn right to 0, pull shackle to open.

Using a number 47 (0.078") drill, drill a hole at "5" on the dial approximately 3/32" from the edge of the dial. Because the dial is slightly larger than the wheel pack, angle down and toward the center of the lock about 5°. Using a fine piece of music wire, probe the hole as you rotate the dial. The drive cam is to the rear, so the wheel closest to the front of the lock will be the number one



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wheel. Rotate the dial slowly left until a gate is found. The gate will allow the wire to be inserted farther into the lock.

Continue to rotate the dial until the wire contacts the right side of the gate. Record this number for the number one wheel. Reverse dial rotation and locate the gate in wheel number two. This time record the point at which the gate allowed the wire to be inserted a little farther. This will be the right side of the gate. Rotate the dial left until the gate is found in wheel four. Continue left until the right side of the gate contacts the wire probe. Record this number for wheel number three. The right side of all three wheel gates are now perfectly aligned with the hole at five on the dial. Add 5 to each number and dial the combination using the dialing sequence above. The lock should open. If the lock fails to open, add 4 or 6 to your original readings and dial again using the same dialing sequence. The lock should open. To repair the lock, simply plug the hole with a #2 x 3/16 button head drive screw. (Drive screws are commonly used to attach metal name plates, etc. to safe doors.) The drive screw looks like a rivet and will not loosen or back out.

Illustration one is a simplified diagram of the rear of an S&G 8088. Note that the drop-in is at "0." As the nose of the fence block enters the drive cam gate, the fence "tries" the wheel pack. If the gates are properly aligned under the fence, the fence will move down and enter the wheel pack. As the fence moves downward, the control pin retracts the locking dogs, releasing the shackle. The fence block is spring loaded away from the wheel pack, allowing free rotation of the dial.

In the fence detail, you will note that the fence is not a part of the fence block. The fence is spring loaded and rides in fence block. This feature

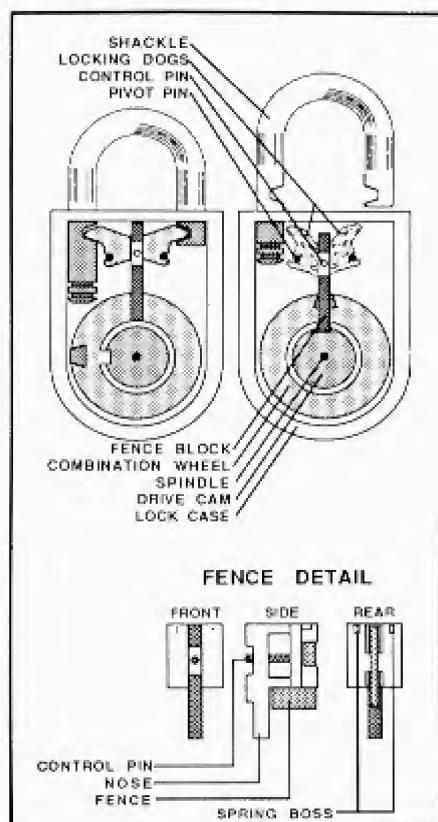


Illustration 1

greatly increases the manipulation resistance of the lock by allowing the nose of the fence block to enter the drive cam gate and present a flat sided contact point much like a direct entry lock. This lock could be manipulated using shackle travel as the indicator. The factory setting for all new locks is left 4 times to 10, right 3 times to 20, left 2 times to 30, right to 0, and pull shackle to open. 06

Q: Could you explain the correct procedure for "tapping the GM sidebar trunk lock?" I've been reading this a lot lately in articles on car opening, but the procedure is never explained. Is

this the only way to get into the GM trunk? I usually pull out the glove box lock and cut a key from code but the codes are not always available.

Also, how is the decorative plate on the trunk lid attached? These plates will not let the trunk cylinder out and I had to turn down a job because I didn't know how to remove this. I've never read anything about this item.

Last but not least, most of the Ford auto manuals explain that to remove the column/mounted ignition lock when no key is available, the cylinder must be "picked" to the "on" position and push in the retainer pin. How can the pins be picked when they're upside down? Why would Ford make their cylinders this way?

I've had to drill several newer autos and this is very time consuming, and the code number is only on the ignition cylinder so that doesn't help.

Your help will be very useful.

*Chris Guyer
Pennsylvania*

A: I will attempt to answer these questions in order. (1) To tap the trunk lock, peel the face carefully to prevent any scratching of the paint around the lock. It is very much like opening a can of sardines. Carefully remove and set aside the dust cover and the two springs. (See illustration 2.) Gently drill the hole. I can't stress strong enough to stop immediately when penetrated.

Now use either a large paper clip with a flattened end or a broken pick. Insert into the hole wedging between the side bar and the housing, rake the wafers as you do the paper clip or pick will keep going in farther. Then use a screwdriver to rotate the plug. The plug will only start its rotation, so while you are applying turning pressure, use a

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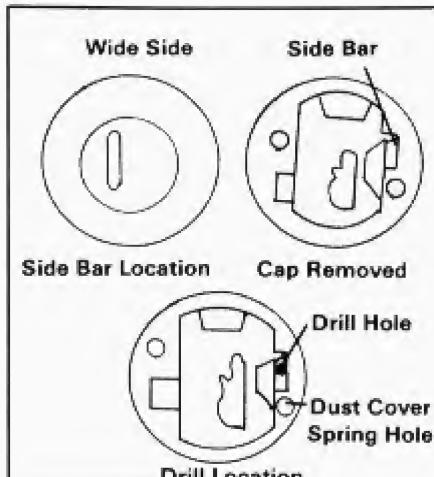
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pair of pliers and pull the clip or pick out. The lock is repairable if the procedure is done properly. Sometimes the drill point and the dust cover spring hole are located in the same place. If so, use a bit just a little smaller in diameter than the hole and drill into the bottom of the dust cover hole. It will still be repairable.

(2) Missing code: If the code is missing you still should have no problem. You simply do what is called a progression to obtain the two missing cuts. The most you can lose is two key blanks. If you missed on the first two you have to get it on the third (unless of course a lock has been changed from the original). Here is a progression system. (See chart 3.)

Tryout cuts for 2 missing tumblers of glove box locks on GM and Old Chrysler
1st key - 11, 12, 13, 23, 24, 34, 35, 45, 55
2nd key - 21, 31, 32, 42, 43, 53, 54
3rd key - 22, 33, 44

Chart 3

(3) The decorative escutcheon: They are usually held on with either rivets or adhesive. You can determine this from the inside of the trunk. If it is rivets, it will show through, if not it's adhesive. Rivets must be drilled. Not such a good idea! Adhesive can be broken loose and then you must reglue it.

(4) How to pick upside down pins: Turn your pick over so that its also upside down, unless the lock is malfunctioning it will pick one way as easy as the other. Another solution would be to work on your impressioning. Remember, the key will mark on the bottom side. I feel that if you would work on these and keep in mind that if the door matches the ignition that would be the way to go. You should have no problem. I don't know why Ford Motor Company installs them upside down. 02



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Letters

Continued from page 7

they needed to brush up in certain areas before taking the test. This program proved to be quite successful and we improved it over the years. Our test from the beginning, was half hands on and half written. As Mr. Robert Wolthoff aptly put it, "The best method of rating people is to test both knowledge and performance."

Some years ago, the members of Northwest Locksmith Assoc., British Columbia Locksmith Assoc., Pacific Locksmith Assoc., and the Alberta Locksmith Assoc., formed the International Locksmith Standards Council. It was to come up with a better way of training and testing for certification. The program we came up with provides a complete basic course designed to be taught by locksmiths on a local level, that is 80% or more "hand on," and is designed so that the information taught by one association will be the same for all that use it.

Fourteen locksmiths spent hundreds of hours each, putting this educational system together and, we had the input of another 60-70 consulting professional locksmiths. This was all volunteer help. We also hired a professional consultant to put our knowledge into a teachable form. All together, the four associations had a cash outlay of about \$50,000, U.S. funds.

This program has been designed so that each course of instruction is by acceptable performance of each of the specific tasks, using all of your senses. Unfortunately, there was a turn over of committee members just as we finished the basic program and, the test portion for those who want to challenge a subject, hasn't been put together, from what I understand.

In the Northwest U.S. and Western Canada, standards of performance have been established and any associa-



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tion using the program or any employer familiar with it, can access easily the skill level of any person representing themselves as locksmiths with basic skills.

Roy Nicholas
Washington

Building Your Business

Continued from page 24

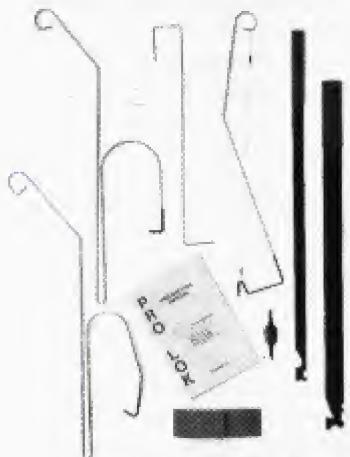
allowing me to be of service to you."

Most customers call you because they want to. I've never been anywhere that there was not at least two locksmiths listed in the phone directory. You were "chosen." Thank your customer for making such a wise decision. ■

Pro-Lok

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will decode Kwikset, Weslock, Weiser and Schlage keys. The KD2 will decode Medeco large pin, Medeco small pin, Master padlock and American padlock keys.



Car Opening Tools.

The three copy NCR telephone service call books are another product from Pro-Lok. This book was tailored to the locksmiths needs. When you take a service call over the phone, simply fill in the blanks. The form is designed to insure getting all necessary information to complete the job. The book is three copy NCR carbonless paper with a wrap around cover. It is designed to give the top white copy to your serviceman. The second yellow copy is hung on a service call board in your shop, in the order the jobs will be done. The third pink copy stays in your book for a permanent record. There are four forms to a page with 200 forms



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per book. The forms measure 4 x 6 inches and are individually numbered for your convenience.

For more information on any of these products contact: Pro-Lok, 2760 S. Harbor Blvd., Suite H, Santa Ana, CA 92704, (714) 641-1249 or (800) 826-9888 toll free. ■

Datsun Servicing

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respond to cuts 1, 2, 3, and 4 from front to back. Notice that the second wafer from the front is a number two cut. The number two cut wafer is exactly even with the major keyway ward. The number one cut wafer is slightly below the top of the ward, and the number three cut wafer is slightly above the keyway ward. The number four cut wafer is the highest. By depressing the wafers one at a time from the front of the lock to the back of the lock, it is possible to sight each of the wafers in the lock. Their relative positions will reveal the proper cut for each.

As you begin the reading, there are two very important things to remember. First, do not apply turning pressure to the lock plug as you read the wafer. If you do, there is a possibility that a wafer might hang at the shear line and give a false indication. Secondly, position the otoscope properly over the keyway. If the wafers are to the bottom of the keyway, the light should be to the top, or above the wafers for best illumination. If the wafers are to the top, the light should be to the bottom of the keyway. Position your eye directly in line with the keyway, not above or below the center line of the lock. If you view the lock from above the center line, two wafers of equal height will not appear to be of equal height. The front wafer will appear shorter than the one behind. Sight straight down the keyway.

If you will remember, in the example, after determining the cuts in the key, I only cut one side of the blank to try in the lock. Nobody's perfect. If the key had not been correct, the other side would have allowed a second chance without wasting a blank.

Put a little magic back into your trade. Learn to read. The customer reactions to this method of key making are a real ego booster. Once mastered, there is no reason to disassemble another door, or lock to make a first key. Use this method to open a locked auto if you are having problems picking or slimming it. ■



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